An analysis of the success of UK agricultural marketing cooperatives: can they effectively redress power imbalances in current market conditions?

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ABSTRACT

This is exploratory research that has examined the efficacy of agricultural marketing cooperatives in the UK as a mechanism to redress power imbalances when faced with highly consolidated downstream markets. This issue would appear to be of particular significance in the light of the continued UK government emphasis on the cooperative action as a means of supporting farm gate prices following the deregulation of European Markets. This research draws upon, and examines the possible linkages between two key bodies of literature, *Power Dependency Theory* and literature based on the issue of *common property* and the *free-rider problem* and presents, through the exploratory framework, the idea that cooperative success is contingent upon an iterative relationship between leverage and cohesion (Emerson, 1962: Olson, 1965). This understanding is used to examine the three diverse marketing cooperatives, and findings from which suggest that cooperatives in current market structures are unable to improve their leverage position over the longer term. The research also suggests that there is not necessarily an iterative relationship between cohesiveness and improved leverage. What is apparent is that Cooperatives endure because they offer other types of benefits to farmers and currently play an important role is sustaining a failing farming sector.

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CHAPTER 1

AGRICULTURAL POLICY AND THE ISSUES OF COOPERATIVES

1.0 Introduction

It is generally agreed that the UK agricultural sector is going through a period of crisis. Despite price increases in the 1990s, total income from the farming sector declined from £7bn in 1970 to £2.7bn in 2006 (DEFRA, 2007b). There has recently been something of a recovery, as in 2010 total farming income increased to £4.38billion (DEFRA, 2010). It has become evident though that farm gate prices in certain sectors are still very low by historical standards, and in certain sectors, such as the pig and dairy sectors, are below the costs of production (BPEX, 2008; DairyCo, 2008)

Whilst the literature points to a number of explanations of the source of this crisis, there is reasonable agreement that its cause can be primarily attributed to the combined effect of the move towards market liberalisation, following the GATT Agreement on Agriculture, and downstream market concentration.

The UK government, under different political hues, has felt compelled to respond to this crisis. Since 1996 there has been a number of rural development programmes, which have included various initiatives designed to promote rural economies. These have included initiatives designed to help farmers develop competitive businesses through innovation or diversification,

as well as initiatives designed to safeguard the "rural" landscape, for example, the environmental stewardship schemes.

A prominent underpinning dimension of much of the government's response has been the promotion of cooperation and farming cooperatives. Cooperative formats vary quite considerably on a number of dimensions, including share ownership, decision rights and membership rules, but up until recently those established in the UK have had more in common with *Traditional* cooperative principles than with the more recent formats that have emerged in the US and Europe.

Traditional cooperatives are defined by four key principles: all shares should be owned by members, each member has one vote, all earnings are distributed to members and no parties should be excluded from membership; the so called, user-owner, user-controlled, user-benefit, and open membership principles (Barton, 1989). Their function is to deliver improved farm gate prices to their members.

In encouraging cooperative action, the government hopes that a less fragmented UK farming sector will become more sustainable and successful. The logic behind this policy is that cooperatives will offer farmers a countervailing force against horizontal or vertical competition. However, despite the heavy focus of the government on cooperative action, the question emerges as to whether this aspect of the government policy response can successfully address problems faced by the sector.

In examining the literature on cooperatives and cooperative action, it is apparent that there are two distinct themes which stand out regarding the success of co-operatives. Firstly, in the context of UK government policy, the success of cooperatives is dependent upon their ability to provide the membership with increased leverage. The first literature theme draws from *Power Dependency Theory* (Emerson, 1962). Emerson suggests that cooperation of this kind will only be an effective counterweight when two conditions are met; that the cooperative a) is able to achieve scarcity relative to that of the exchange partner, b) is able to improve the exchange partner's motivational investment. The second and more substantive strand of the literature focuses upon the issue of cohesion, which has both influenced and drawn upon the work of Olson, 1965). Where the concept of cohesion reflects the coherence of cooperative member objectives, Olson has argued that where benefits are attained, freeriding can become rampant, causing the institution to decline and disintegrate. Of course the two literatures are not unrelated. That is to say that a) a lack of organisational cohesion may undermine the ability of cooperatives to deliver a negotiated counterweight and b) conversely the failure of the cooperative to act as a counterweight may lead to a loss of organisational integrity.

In this thesis, the author will examine the extent to which UK farming cooperatives are in fact increasing leverage and maintaining cohesion and the intuitive expectation that greater leverage will assist cohesion and cohesion will assist great leverage. If, across the sector, agricultural cooperatives are able to achieve both leverage and cohesion then it is likely that the UK government will deliver the desired-for alleviation of the crisis in the sector. If they can't, the efficacy of the government's policy will be in doubt.

The author pursues this research aim via the mechanism of an exploratory study based on qualitative data. Data was collected from three cooperatives, in different commodity areas, which have predominantly the characteristics of traditional cooperatives. The research findings suggest that there does indeed appear to be an iterative relationship between leverage and cohesion and cooperatives are unable to improve leverage when faced with a highly competitive buyers' market. Their ability to generate leverage and thus coherence is further undermined by the offensive strategies of competitors in a highly contested market.

The thesis proceeds in the following manner. This introductory chapter starts by describing the crisis in agriculture in more detail and the measures implemented by the UK government, before going on to introduce the discourse of factors affecting the success of cooperatives. Chapters 2 and 3 examine the theoretical constructs that underpin the thesis. In chapter 2 the exploratory theoretical framework based on Emerson is outlined. This is followed in Chapter 3 by examination of the insights gathered from Olson on the free rider problem. Chapter 4 brings the two sides of the problem together into a single exploratory framework. These are followed by chapter 5, the methodology, and chapters 6- 9, the case studies. Chapters 10 and 11 respectively discuss the research and its limitations and recommendations for future research, followed by the concluding chapter, chapter 12.

1.1 The UK farming sector

In the UK, over recent years, farmers have seen a sharp decline in farm gate prices (Van Bekkum, 2001). These have fallen, in some cases, by 50% of their mid-1990s levels, (DEFRA,

2000). At difficult times, a number of factors are seen to have contributed, including overproduction and the collapse in commodity prices, the high value of the £ sterling, the collapse of the Russian and Asian markets, the excessive returns of retailers and wholesalers, the impact of animal welfare standards, the inelasticity of the demand for food, and the lack of market orientation of farmers (Anderson et al., 2001; Anderson, 2004; Vorley, 2003; Aksoy et al., 2005; Regmi, 2005; DEFRA, 2007b). Two further 'culprits' are seen to be particularly prominent contributors to the current crisis: trade liberalisation and the continued consolidation of the buyers' market. The next four sub-sections discuss the above in more detail.

1.1.1 The decline in agriculture – evidence of economic problems

Despite the increases in prices during the early 1990s, there has been evidence of a continual decline in farm incomes. In the UK, total income from farms declined from £7bn, in 1970 to £2.7bn in 2006 (Oglethorpe, 2005; DEFRA, 2007b; OECD, 2008). In 2005/06 a quarter of farmers had net incomes of less than zero, and half had an income of less than £10,000 (DEFRA, 2005; 2006b). Average income per farmer in 2007 was around £13,540 and whilst this was up from £12,500 in 2006, a function particularly of the consolidation of the farming sector, it had declined from £20,558 in 1996. Some of the highest average incomes were found in cereal production, with an average income to farmers of £27,900. However, increases in costs of production, due to rising fuel prices, have resulted in even slimmer profit margins and these have been particularly marked in cattle and sheep farms in Less Favoured Areas (LFA) (Vorley, 2003; DEFRA, 2006b).

These trends, along with the high price of land and low succession rates have resulted in the steady decline in the farming population. Currently around 1.2% of the population are involved in farming, but the number of farms had declined from some 500,000 farms in the UK as a whole to around 311,000, including horticultural holdings, by 2005 (Vidal, 2003; DEFRA, 2007b). On average, the decline in numbers of farms across OECD countries has been 1.5% per year (Vidal, 2003).

Farm income levels and the number of farmers leaving the sector have been attributed to the decline and stagnation of UK commodity prices (DEFRA, 2007b). In 1996-1998 the average price for cereals was £137.50 per tonne but by 2003 this had declined to £110.70 per *tonne*. Similar price declines were evident across other commodities. Milk declined from an all-time high of over 24p per litre in 1995-1996, following the disbandment of the Milk Marketing Board in 1994, to 17.05 pence in 2002, creating as a consequence a decline in livestock prices over the same period (http:statistics.defra.gov.uk/esg/ publications/amr/datum, 2008). Alongside the decline in UK farm gate prices, the cost of production, mainly on account of increases in fuel and fertiliser prices, has shown a steady increase over the same period (DEFRA, 2007).

As discussed above, any number of reasons has been proposed as factors affecting farm incomes and farm gate prices. Yet, two of the most frequently highlighted are the liberalisation of trade and over-supply (Anderson et al., 2001; Anderson, 2004; Vorley, 2003; Aksoy et al., 2005) and the interconnected increased concentration of market power amongst trans-national corporations (Anderson et al., 2000; Anderson, 2004; Lang, 2005).

1.1.2 Causes of problems – market concentration downstream

A handful of integrated store groups control most of the UK market. Food sales through major retailers increased from 22% in the 1950s[1], to 44% in 1971, to current figures where the top 4 retailers account for more than 75% of the UK market, of which of the top retailer, Tesco, holds over 30% (Wrigley, 1987; Morelli,1999; Clark, 2000; IGD, 2005; IGD, 2009).

Increased concentration within the retail sector is paralleled in other European countries and the United States as well as being an emerging trend at a global level. Published food sales figures indicate that the percentage share of food sales for retailers is dominated by supermarkets, even in African states (Regmi et al., 2005).

These levels of concentration in the UK can be linked to events of over half a century ago. One such was the abandonment of the resale price maintenance system in 1964. The effect of the removal of RPM, because it prohibited price fixing by the manufacturers, was to redistribute the balance of power between manufacturers and retailers (Morelli, 1998; 2004). However, concerns were expressed as early as the 1970s (Bolton Committee, 1977) about the impact of deregulation on smaller retailers and the growing concentration within this sector (Clarke, 2000). As well as the RPM change, increased consumer mobility through car ownership and an increase in the numbers of working women added momentum to the changes in market structure, bringing about a significant shift in the power balance between manufacturers and retailers (Dawson and Kirby, 1979; Hollingsworth, 2004).

[1] Retailers with more than 10 outlets

Increased purchasing power, as retailers continued to consolidate, resulted in the continued erosion of manufacturers' profits, with average margins for manufacturers declining from 12% in1960 to around 8% in 1986 (Strak et al., 1995). None the less, it was the development of own brands by the multiple retailers that brought about *a fundamental transformation,* that is, a reversal of the power balance between the manufacturers and their customers. At first, consumers perceived own brands to be a cheaper option, but retailers have since overcome this negative perception (Burt, 2000; IGD, 2003).

In their position of market dominance, retailers have effectively become gatekeepers to the consumer, controlling shelf space as well as consumer perceptions of quality and acceptable product standards (Cooper, 2003; Dobson et al., 2003). This has enabled the retail sector to place increasing pressure on manufacturers to absorb additional costs such as *slotting fees*[2], shelf ready packing, factory gate pricing and audit costs (Sullivan, 1997). Retailers have attempted to further reduce costs through the centralisation of distribution systems and the development of category management, which is a type of sourcing strategy whereby retailers are looking for fewer, larger, more efficient and innovative suppliers. Both measures have resulted in the decline of alternative markets for the farming sector (Hughes, 1996; Fearne and Hughes, 2000; White, 2000; Hingley, 2001).

[2] Fixed fees paid to retailers by manufacturers for stocking a new product on a trial basis

The shift in power positions between the retail and manufacturing sectors and changes in the market channel structure have placed the farming community in a weak position and made it increasingly dependent on the multiple retail sector.

The impact of UK retail practices on farmers and manufacturing sectors has not escaped the notice of the government and the media. A number of investigations have been conducted by the UK Competition Commission, in 2000, 2003, and 2007, but have repeatedly found that retailers are not exploiting their position of power but using it to provide benefits to the consumer (MMC, 1981; MMC, 1985; MMC, 1999; Burt et al., 2003; Cooper, 2003; Dobson et al., 2003; Hollingsworth, 2004). Furthermore, it has been found that there are "no systemic problems" with the economic viability of suppliers (Emerging Thinking report, 2007). Nevertheless, the UK government introduced the New Enterprise Act in 2002 and the Retailer Code of Practice, as a framework to empower the Office of Fair Trading to have an annual review of practice to ensure retailer conformance. The introduction of these measures would seem to reflect acute fears of monopsonistic behaviour within the sector.

Whilst admittedly there has as yet been little official evidence that suppliers to the retail sector have had to accept lower prices than from alternative buyers, comparisons of gross margins would appear to suggest that this is so (Cox et al., 2005; 2007). Furthermore, reports take little account of the practices of retailers who place pressure on suppliers to absorb the costs of due diligence, delivery and marketing (Competition Commission, 2007), although it is acknowledged that supermarkets "bully" their suppliers (DEFRA, 2007a).

1.1.3. Causes of problems – liberalisation of trade

A second factor that has significantly affected the nature of farm gate prices is the de-regulation of European markets. As the result of the Uruguay GATT/ WTO Round and the Agriculture Agreement 1986-94, pressure was placed on many industrialised countries to reconsider their agricultural and trade policy. The EU countries were also required to introduce measures in order to relax tariffs and quotas and reduce the agricultural prices, under article 39 of the Treaty of Rome as part of the European Common agricultural policy "CAP". The Common Agricultural Policy was originally devised with the key objective to increase productivity levels and living conditions, through the stabilisation of market conditions in the mid-20th century.

The measures imposed were based on a system of target pricing for crops grown within the EU, and threshold pricing for goods imported into the Union countries. They were achieved through the direct injection of funds into the market by way of intermediaries. For a sector predominantly determined by price signals, target pricing tended to enhance any market distortions and resulted in many cases in significant over production. Although European farmers were ostensibly protected from the effects of price depression, over supply within the EU was seen to have the impact of depressing world prices.

The continued depression of world prices, which in part arose out of the EU price mechanism, resulted by the mid-1980s in increased pressure from members of the WTO to include agricultural produce in the General Tariff and Trade discussions. The WTO first brought agriculture to the agenda in 1986, because of calls for radical changes in the protectionist

policies operated by many of the developed countries (Tangerman, 2003) Http://www.wto.org/English/thewto_e/whatis_e/tif_e/agrm3_e.htm.

The aim of the Agricultural Agreement of 1994 was to reform trade in the sector and make policies more market orientated. The negotiations had focused on three pillars or main areas: market access, including tariffs, quotas and other trade restrictions confronting imports; domestic support, in the form of subsidies and other support programmes, including those that guaranteed farm gate prices and income; and export subsidies. These were all methods designed to make exports artificially competitive.

The 1994 agreement was designed to allow governments to continue to support their rural economies, but with reduced trade distortions. The rationale was that subsidies and border barriers have had the effect of artificially supporting prices in developed countries, causing world over-production. This, in turn, it was argued, led to declining world prices, although a counter argument suggested that these assumptions were based on an inadequate understanding of the farmer's response to low prices (Aksoy et al., 2005). Indeed, it was noted by a number of bodies in Europe that the removal of price interventions and subsidies would have a negative impact on farm gate prices to the benefit of buyers (Hendrichsmeyer and Witzke, 2000; Keyser and Merbis, 2000; Van Bekkum, 2001).

As part of the 1994 agreement, import tariffs for developed countries were to be reduced by 6% per annum, 36% over six years, with an average reduction of import tariffs for developing countries of 15% over the same period. Further domestic measures having a direct effect on

production and trade were agreed and the total aggregate measures of support within developed countries were expected to be reduced by 20%. Measures that did not stimulate production were introduced, the so-called *green box measures*, that included research and other support measures, as well as payments direct to farmers that did not promote production.

The response from many of the developed countries was immediate, with many of the domestic support mechanisms being converted *to green box measures*. The EU commission was already under considerable pressure from members to act, due to the considerable cost to both governments and consumers of the Common Agricultural Policy (Allen et al., 1987; Gardner, 1996; Swinbank et al., 1999; OECD, 2001).

The MacSharry reforms of 1992 led in part to the successful conclusion of the WTO talks (Daugbierg, 2003; Tangerman, 2003). The CAP reforms had laid the foundation for a radical change. They highlighted the need to shift the emphasis away from the promotion of efficiency in production by switching from price support mechanisms to direct payments to farmers and the introduction of measures to reduce production of milk quotas (see, for example, CEC, 1988; Harvey, 1997; Hubbard and Ritson, 1997; Ritson, 1998; Winter, 2002).

By 1995, under the Maastricht Treaty, the EU put forward further measures to decouple payments from production, the so-called *Pillar 1*. This came into place in 2003 in the UK in the form of the Single Farm Payment (Frontier Economics, 2003) and shifted policy emphasis towards the development of a more competitive farming industry, something promoted under

Pillar 2 of the Maastricht Treaty. Here, there was greater emphasis not on the support of agriculture but on the development of an integrated rural economy (Lowe et al., 2002).

Evidence for the success of the Uruguay Round is patchy. However, there has been a general agreement that trade liberalisation in agriculture has generated more global transactions, with greater volumes of products flowing between countries (Tangerman, 2003). The World Bank has investigated these trends and discovered that whilst certain countries have been unable to gain increased access to global markets, the gap between world price and domestic price has narrowed, with average border gaps decreasing from 63% to 31% by 2002.

1.1.4 Discussion

It might be suggested that whilst trade liberalisation was primarily driven by the need to reduce overproduction in the west and reduce world economic imbalances, the key beneficiaries of the Agreement on Agriculture (AoA) are the major agri-businesses and the retailers. Evidence suggests that trade liberalisation has offered import and export opportunities for larger players, offering increased markets for certain high value commodities, such as meat, and fruit and vegetables in developing countries. Yet, the proportion of the retail value retained by the farmers is minimal. In the case of Kenyan exports this has been estimated at around 14% of the retail value (Vorley, 2003). By comparison, increased competition from overseas has placed UK farmers under pressure. Indeed, the impact of trade liberalisation appears to have been predominantly to increase production and force down world prices (Tulipe and Michaels, 2004),

opening UK farmers up to global competition and pressures on prices due to the buying power of trans-national corporations within the food sector (Allenson et al., 1996).

1.2. UK Policy Responses

The response to the crisis focused on the development of initiatives to encourage farmers to measure success not only on profitability but on their ability to predict and deliver customer, economic and environmental wellbeing (DEFRA, 2006a). The 2003 reforms of the CAP have further enhanced early initiatives to remove interim support mechanisms, export refunds and to place reliance on measures to improve the business orientation of farmers. The second phase of reform, agreed in June 2003, was aimed at further strengthening rural development by transferring more funds from the *first pillar* to the *second pillar*, as agreed under the Maastricht treaty.

1.2.1 Business / Market orientation

Interim steps in the adjustment of European policy were evident in the emergence of 'green box measures' within the European Union. These shifted payment from entry barriers, toward direct payments, in headage payments for cattle, acreage payments for arable land and production volume controls in terms of set-aside and milk quotas, as recommended under the MacSharry Reform. By 1999, the European Union had established the next phase of redefining policy in order to meet the guidelines set down under the AoA. Under Agenda 2000, (Agenda 2000, 1999) member states were required to set down a 7 year plan 2000-2006 and, within the

guidelines, to set down the mechanisms for the development of a sustainable rural economy (DEFRA/MAFF, 2000). Such development programmes not only advocated the decoupling of compensation payments from production but supported measures to enhance environmental management and the socio-economic development of rural areas, under council regulations 1260/1999 and 1257/1999 (Lowe et al., 2002; DEFRA, 2006c).

A further milestone followed the outbreak of Foot and Mouth Disease in 2002, when the government commissioned Don Curry to examine the nature of the food industry and provide recommendations for the future of the industry. More recently, following the 2003 CAP reforms, the Rural Development Programmes for 2007 -2013 again highlighted the need for farmers to become increasingly focused on market opportunities and operate according to market pressures. These policy documents similarly reflected the nature of the WTO's objective of free markets for agricultural commodities, with the view to eliminating over production and trade distortion.

The rural Development programmes were designed to address the issues of inefficiencies within farming methods, supply chains, business practices and exchange relationships and encourage farmers to become more market and business orientated (DEFRA, 2006c). Policy documents show that the primary objective of the government was to encourage farmers to adapt business practices in order to ensure sustainable agricultural incomes.

The three key ways forward that have been identified are the development of alternative market opportunities for farmers, the improvement of farm and supply chain efficiency through closer

co-ordination and collaboration within the supply chain, and the development of added value and differentiated products (DEFRA 2006a; DEFRA, 2006c; DEFRA, 2007a). The value of cooperative activity to address the problems has been a recurrent and dominant theme. Measures designed to generate collaboration between producers are being progressively initiated, with increased integration within the supply chain (DEFRA, 2005a; DEFRA, 2006c)

1.2.2 Changes to commercial relationships

Under the Rural Development Programmes of 2006 (England, Wales, N Ireland, and Scotland) and the more recent Rural Development Programme for England (RDPE), two possible solutions are proposed to farmers (DEFRA, 2006c[3]): the development of new markets and managing existing relationships more effectively. This means that the government suggests that farmers should either look to improving the functionality of the products they offer to existing buyers through delivering greater efficiency in the supply chain or added value products, or they should switch to alternative buyers.

1.2.2.1 Direct to market / New customers - the development of new markets

Measures to develop new commercial relationships within the supply chain, either through adding value to products or through accessing new markets, are based on a perception that businesses, in particular farmers, should to respond to what consumers care about and want. A number of initiatives are in place that aim to reconnect farmers with the market. Bodies such as

[3] The Rural Development programmes focus on 4 key areas (axes) Axis 1 – which promotes profitable, innovative, competitive businesses, Axis 2- which promotes agri-environmental measures, Axis 3- which promotes rural diversification and capacity building and Axis 4- which promotes tourism and the Leader programme.

the Regional Development Agencies, set up in 2002, were given the remit to work with *Food for Britain* and the *International Agri Technology Centre (IATC).* They are supported by local authorities and a range of NGO organisations such as the *East Anglia Food Link* and *Sustain,* as well as private consultancy firms.

These initiatives are concerned with the exploitation of new markets in the UK and overseas, in order to develop new sources of income for farmers. Amongst them are the initiatives that deal directly with the consumer, such as farmers' markets, box schemes and farm shops, local food networks. There are also public procurement initiatives under the *Public Sector Food Procurement Initiative* that have facilitated, in partnership with local authorities, the development of local food hubs and networks. Inherently, much of this policy is underpinned by the development of collaborative vehicles to facilitate training, benchmarking and market access. The formation of discussion groups and business clubs, in particular under *rural gateway projects* run by *Business Link,* has been designed largely to help farmers find ways of accessing new markets or develop new rural enterprises through diversification strategies.

1.2.2.2 Changing relationships with existing customers

1.2.2.2.1 Value creation

The importance of greater integration between members of the supply chain is central to UK rural development policy. The Red Meat Industry Forum has operated as a trail blazer for four business programmes that include: *Farm Business Improvement, Probe, Value Chain Analysis* and *Master Classes*. The emphasis on efficiencies gained particular momentum on the publication of the Curry Report (2002), in which it was maintained that the development of a

competitive farming industry is contingent upon the recognition of the mutual dependency of all parties within the supply chain. The Curry Report placed considerable emphasis on the establishment of a *Food Chain Centre*, to be administered by the *Institute of Grocery Distribution*, with the remit of mapping and measuring the supply chain, and eliminating unnecessary costs, and the objectives of identifying and disseminating best practice. The objectives were to be achieved through teamwork and collaboration throughout the supply chain. In consequence, a variety of business clubs have been formed by *Levy groups, Regional Development Agencies*, and independent consultants.

1.2.2.2.2 The distribution of value

It has also been suggested that farmers would benefit were they able to improve farm gate prices either by reducing the number of alternative suppliers and/or by differentiating their product within the market place. Within the context of this policy, cooperatives are seen to be the key mechanism through which farmers may both instigate the reduction of alternative suppliers and implement a strategy of product differentiation. In effect, given the fragmented nature of the farming industry, cooperatives are seen to be key to the development of brands in the farming sector, by cutting the cost of new product development, marketing and risk to the individual farmer. Since the rural white paper of 1999, the underpinning message is that collaborative and cooperative action can enable the successful development of farm businesses. This message was reiterated in a succession of government reports, including the 2002 Curry report, in which it was suggested that the best way for small farm business to attain the benefits of a large enterprise was to collaborate with others (DEFRA, 2001; 2002; 2005; 2006c).

1. 2. 3. Delivery of changes to commercial relationships

To summarise, the implementation of UK policy in the sector has been based on the premise that the revitalisation and growth of market orientation within the farming industry is contingent upon a package of voluntary regulatory and market based initiatives, to be delivered through three key mechanisms:

1. Subsidies, pump-priming, and support funds that provide short term aid to protect incomes and through longer term support and through investment programmes to stimulate the development of market led initiatives

2. Education and information dissemination that provide a mechanism to facilitate the development of expertise in addressing issues of production and markets.

3. Collaboration and cooperation within the supply chain that provide support and funds for the development of collaborative relationships.

1.2.3.1 Subsidy and short term income protection and modulation

One key subsidy that serves as a mechanism to smooth the transition of farmers from payments schemes to market led initiatives is the Single Farm Payment. The SFP, with the limited coupled elements, was designed to ensure that there is a secure income flow to farmers whilst they are adjusting to the rural policy framework.

Introduced in the UK in 2005, the full grant of Single Farm Payments and other direct payments would only be paid if the farmers adhered to the statutory requirements of the legislation. These set down linked standards of environmental and food safety, animal and plant health and animal welfare management, and a requirement to keep all farmland in good agricultural and environmental conditions, a system known as *cross-compliance*. Non-compliance with the regulation would result in the forfeit of funds.

The European states were, however, given the option as to how payments should be determined. Member states were able to devise a payment system based either on historical payments received by each farmer or on the actual area land farmed. Despite considerable discussions within the industry, particularly with respect to the impact on hill farms, it was determined in the UK that the SFP criteria should be based on historical data, from the period of 2001-2002. This meant that direct payments to farmers were based on previous calculations of area payments in arable on the headage payments for sheep and beef cattle and on milk quotas in dairy. This seriously disadvantaged other livestock farmers, such as pig and poultry farmers and horticultural producers, who had not previously received European direct funds.

In order to balance out the impact of currency fluctuations, British farmers could also make the choice of being paid in Euros or £ Sterling, an aspect which has worked to their favour given recent declines of the £ against the € up until 2011 (DEFRA, 2002).

1.2.3.1.1 Modulation

A further reform of the CAP was agreed in June 2003, that aimed to further strengthen rural development by transferring more funds from the *first pillar* to the *second pillar* of agricultural policy (European Commission: http://europa.eu.int/comm DEFRA: http://www.defra.gov.uk), thus shifting the emphasis of EU policy from the support of agricultural activities to integrated rural development. Following on from the earlier reforms, the objective was to strengthen rural development policy with more EU money. New measures were introduced to promote the environment, quality and animal welfare and to help farmers to meet EU production standards, starting in 2005. This entailed the retention of a proportion of direct payments, a system known as *modulation*, in which proportionally bigger farms delivered a larger share of the funds designed to finance the new rural development policy.

In the light of the enlargement of the EU, this constituted a mechanism for financial discipline to ensure that the farm budget, fixed until 2013, is not overshot. Britain was one of the first EU countries to implement *modulation* in accordance with the objectives of the EU. Since 2005, all European countries have been required to retain funds, at a rate of 4% of subsidy payments in 2006 and 5% in 2007. The funds raised are paid back to Brussels and redistributed to members and it is agreed that no member should receive less than 80% of the funds collected.

In March 2007, the UK secured the right to continue to levy an additional national rate in order to deliver the four measures or Axes promoted under the English Rural Development programme 2007-2013. As indicated earlier in this chapter, these were measures, entitled *Axis 1,2,3,4*, were designed, respectively, to promote more profitable, innovative, competitive businesses, environmental stewardship, rural diversification, and capacity building and tourism.

Northern Ireland, Wales and Scotland have negotiated similar rights to the increase of the rates levied from *modulation*.

In England, 80% of the additional funds have been utilised to fund the Environmental stewardship schemes, a further 10% used to fund Axis 1, and the remainder delivered under Axis 3. Additional voluntary levies remain in the hands of the UK government and have, under Axis 1, been employed to facilitate member investments in the pump priming of added value, bench marking and diversification initiatives.

1.2.3.1.2 Funding initiatives – shifting away from Project based funding streams

Under the English Rural Development Programme 2000-2006 there were a number of diverse funding streams available. These included the processing and marketing grants and the rural enterprise grants, as well as initiatives for vocational training, energy crops, country stewardship, and organic farming schemes. Reports show that these initiatives supported transition of agricultural businesses into the market economy, with some 380 new products been brought to market through: the support of Processing Marketing Grants and by the setting up of over 3,000 Rural Enterprise Scheme Projects.

From 2007, such initiatives under the new rural development programme have safeguarded 14,500 jobs, and over 1,200 farm diversification projects. The numerous project based schemes have been simplified into 3 key streams or axes, Axis 1, sustainable food and farming, Axis 2, national resources, and Axis 3 for sustainable rural development.

Axis 1 and Axis 3 funds are available for improvements in marketing, development of added value products, new processing plants, farm diversification, and the development of collaborative initiatives. Processing and marketing grants, administered by DEFRA, retain their remit under the label of agricultural development schemes. Other funds, for the development of agricultural businesses other than environmental and forestry schemes, are administered by the Regional Development Agencies (RDA). Under the 2007–2013 measures, the core themes of Axis 1 are the provision of vocational training programmes, the development of advisory services, the setting up of farm management relief and advisory services, adding value to agricultural products, and the collaborative development of new products. Of these applications the three largest budgets have gone to farm modernisation, adding value, and development of cooperative initiatives.

Funds that were originally available under the Rural Enterprise Scheme are now available under Axis 3. These include measures designed to promote capacity building and the raising of economic activity in rural areas. In addition to the funds delivered for the purpose of development and training via regional development agencies and DEFRA, additional support is delivered through what are known as the Curry Bodies (DEFRA, 2006c). These include the Food Chain Centre, the English Farming and Food Partnership, the Red Meat Industry Forum and the Cereal Industry Forum, established as recommended by the Curry Report and funded through the DTI and DEFRA. The purpose of these bodies is to generate business improvement, cooperation and information flow in the food supply chain.

1.2.3.2 Education about relationship development

Besides grants focused on training within the RDPE, the key focus of what have been described as the Curry Bodies (DEFRA, 2006c) is the dissemination of best practice. The Curry Bodies include the Food Chain Centre, the English Farming and Food Partnership, the Red Meat Industry Forum, and the Cereal Industry Forum. Each has developed a series of benchmarking exercises in order to disseminate best practice. Established as a result of the recommendations of the Curry Report and funded through the DTI and DEFRA, the purpose is to generate business improvement and information flow in the food supply chain.

The work is project based and there have been 5/6 grants made available. The organisation is run through a steering group, chaired by the Institute of Grocery Distribution (IGD). The initiative drew from previous developments that were designed to tackle issues of benchmarking skills and pricing transparency and the relationships between the farmers, and processors or retailers. These bodies operate by establishing partnerships with the levy boards and partnership boards in order to establish an industry forum. The four main forums cover red meat, home grown cereals, the dairy industry, and fresh produce.

Similarly, the English Food and Farming Partnership, the collaborative board recommended by the Curry report, is designed to promote good practice within the farming sector. It endeavours to achieve this through the growth of market focused, farmer controlled businesses, amongst which we find cooperatives, joint ventures and strategic alliances between farmers and other initiatives, in order to develop co-operation and partnership activities not only between farmers

but also between farmers and the food chain. The Office of Fair Trading (OFT) will look at the extension of cooperatives in the same way as any other business (DEFRA, 2002).

The organisation is independent but works in an inclusive manner at all levels of the industry. Target participants include non-food growers, managers, farmers, food processing businesses, importers and exporters, food wholesalers and retailers, support businesses, influence groups and public bodies.

1.2.3.3 The emphasis on cooperatives

As indicated earlier, teamwork and cooperative action has become an important vehicle in the delivery of funds and other forms of government and non-government support. Activities designed to address issues of waste, cost and efficiency within supply chains are examined both through business groups, as established by a variety of parties, and by greater vertical co-operation between parties throughout the supply chain.

Horizontal networks in the form of business networks have been set up by a variety of parties including Business Link, the RDA and the Levy groups. Examples include the British Pig Executive forum and the benchmarking initiatives run through the Food Chain Centre. At one level they are a mechanism to examine and disseminate best practice but they also encourage farmers to work towards a more formal cooperative arrangement.

Evidence suggests (DEFRA, 2007a) that formal collaborative arrangements are more likely to occur when farmers enter into a cooperative activity with the specific commitment to make

financial investment, and less likely to emerge from continued association through business clubs. The English Farming and Food Partnerships (EFFP), as recommended by the Curry Report, were specifically designed to encourage and facilitate the development of cooperatives or farmer controlled businesses in the manner of the former. They have teams of advisors in 8 regions of England who work directly with the farm based businesses of small farmer groups and individual farmers wanting to collaborate. Much of their work is centred on developing market focused business solutions for farming and food businesses. In order to support these initiatives, they offer a range of services including market analysis and feasibility studies.

The EFFP is promoting a variety of forms of cooperation that include traditional cooperatives focused on supply and marketing, non- traditional cooperatives that draw upon external investors and strategic alliances, in the form of farmer and producer marketing groups and buying groups, machinery rings and joint ventures. Each cooperative group demonstrates a variety of competitive strategies, including cost leadership through the development of collective grain drying facilities, and niche branded products, as in Peak Choice Meat. This strand of the policy response, the strand of most relevance to the thesis, is now explored in more detail.

1.3 Cooperatives

One of the key themes underpinning policy-making as a response to the crisis has been towards the development of countervailing co-operatives supplying commodities and added value products into the main stream supply chain. Despite the patchy performance of cooperatives

historically in the UK, the UK government believes that co-operatives offer a fragmented farming sector an alternative to subsidies and direct intervention and a means of facilitating investment.

The lack of a strong tradition of cooperatives within UK farming communities, which was in part due to the existence of the marketing boards, has been considered to be a drawback in the establishment of a sustainable farming sector. Yet, despite this unpromising background, recent evaluations have shown indications that more farmers are becoming involved in formal collaborative initiatives.

Figures indicate that 30-40% of farmers in England belong to a co-operative or farmer controlled businesses. These include 47% in the dairy sector, 40% in general cropping and 34% in cereals, although only 5-17% in livestock (DEFRA, 2007a). With at least 109,000 members, which represent around 40% of all farmers, farm supply cooperatives are the most frequent form of cooperative. Yet minimal evidence has been provided as to whether the establishment of formal collaborative measures has been successful, and if not, why not, despite the fact that the UK government's emphasis on cooperatives makes it an important area of study. This thesis seeks to go some way towards filling this gap.

1.3.1. Defining cooperatives

Cooperatives can be seen to hold a duality of identity, as both a collective of independent businesses as well as a virtually integrated firm. The hybrid nature of cooperatives, in that they

display governance structures which are both bilateral and unilateral, results in particular issues for the business format that are distinct from those that pertain to other forms of governance structures – an issue that is at the heart of this dissertation.

There are two types of co-ops, with variations within those types. First, there are *Entrepreneurial* cooperatives, distinguished by their offer of tradable shares with a secondary value and individual rights of equity which are available to either members or to external stakeholders. *Entrepreneurial* cooperatives vary principally with regard to two aspects: the nature of membership and the participation of external stakeholders in the cooperative. Second, there are *traditional* co-ops, distinguished by the restrictions placed on access to external funding as specified under cooperative rules (Cornforth, 1989).

At the start of the research, whilst agricultural cooperatives across mainland Europe and the US had already evolved into Entrepreneurial cooperatives, cooperatives in the UK had more in common with *traditional* cooperatives than many of their European cousins. It was for this reason that *traditional* cooperatives became the focus of this study.

*Traditional c*ooperatives are defined in terms of the original ten principles established by the Rochdale Pioneers (LeVay, 1983; Birchall, 1997; Evans et al., 2005) and may vary only according the participants. That is to say, a cooperative may be a worker cooperative, a requisite cooperative or a marketing cooperative.

Traditional cooperatives are distinguishable from other business forms in that the enterprise is owned collectively by its members and there is no individual ownership of equity. All shares are owned by members but hold no tradable or appreciable value. There are no restrictions to membership, that is, there is open membership and membership is free. Each member has one vote, not linked to the significance of their contribution to the cooperative, and directors are elected by the members. All excess earnings are distributed to members according to use, patronage or monetary investment (Barton, 1989, p1).[4]

The essential elements are that members of marketing cooperatives are not only suppliers to, but also owners of the cooperative. This dimension places pressure on the cohesiveness of the governance form, as will be explored later on.

1.3.2 Definitions of Success

Cooperatives are central to government policy. It is presumed that they will play a major role in the protection of farm prices and margins and thus counteract the impact of a more liberalised market on UK farmers. The argument made by the government and others, including Emerson, is that a coalition of farmers has the ability to counterbalance downstream dominance and so improve farm gate prices. This means that success is a function of the delivery of improved farm gate prices and margins to the UK farming sector. This is distinctive from non-cooperative

[4] It can also be noted that the original ten principles of cooperatives as identified by the Rochdale Pioneers also included principles of member education, no credit transactions, and working to the common good.

firms, which simply measure success in terms of a financial measure such as above normal profits or return on investment.

A further distinction between non-cooperative and cooperative organisation, is that the cooperative is noted to be a comparatively fragile form of governance and at risk of failure as a consequence of internal and external free riding. All farm businesses must gain from the coalition, otherwise there is a risk that the members will defect and the cooperative will become unstable. This suggests that the cooperative's success is also based on its ability to provide sustained, improved farm gate prices and profitability for farmers who are members.

1.3.3 Explanations of success and failure

It is the contention of the author that there are a number of attributes of the cooperative and its market that affect its success. As defined in 1.3.2, in order to be successful, a cooperative must provide a countervailing power mechanism (Mauget et al., 1996; Arcas et al., 2003; Beverland, 2005; Edwards et al., 2005; Beverland, 2006) and it must also achieve a degree of longevity, something that can be impeded by the presence of internal and external freeriding.

Dealing first with countervailing power, in the absence of a body of cooperative-specific literature, Emerson offers us an instructive theory: *Power Dependency Theory.* His thesis suggests that power is a function of the relative dependency of one party in terms of the other. This means that simply forming a coalition or cooperative may not be sufficient to

counterbalance the power attributes of the other party; it may increase their dependency on the coalition of farmers but not to a level that outweighs the dependency of the coalition.

Each party has two key means of resisting the power of the other party. A dependent party could either decrease their dependence on the more powerful opponent by decreasing the opponent's power or by increasing their own power. *PDT* suggests that cooperatives can improve the financial position of farmers by increasing motivational investment, for example through the development of branded products, or by reducing the number of alternative sources of supply for downstream customers. As a result, Emerson offers insights into the leverage created through collective action.

However, although it provides insight into countervailing power, it is evident that *Power Dependency Theory* fails to examine the extent to which group dynamics impinge upon the efficacy of collective action as a means of redressing power imbalances. The literature on collective action (Olson, 1965) and farmer cooperatives corrects this and suggests that collective action is inherently unstable because the calculative rationality of individuals runs counter to the collective good. Olson argues strongly of the dangers to collective action of the free rider problem. He believes that if parties cannot be excluded from obtaining the benefit from collective action, irrespective of their level of investment, there is little incentive to contribute to the collective action. If all were to act in this manner then collective action would not take place and no-one would benefit. The problem lies in power of self-interest over the collective. Whilst recognising the work on agricultural marketing cooperatives (Cook, 1995; Nilsson 1999; Van

Bekkum, 2001), this thesis draws principally on the Olson principles in examination of the free rider problem.

The principle of freeriding hinges upon twin axioms of self-interest and calculative rationality and that the most rational option is to benefit from the common or *public goods* whilst letting others pay (Reisman, 1990; Olson, 1965/1971). Cooperatives are particularly vulnerable to free riding. This is because benefits are non-excludable and there is no appreciable value to investments made by members into the collective whole. In addition, there are no perceivable consequences to the individual if they choose to shirk the costs of cohesion (Cook, 1995; Olson, 1965)

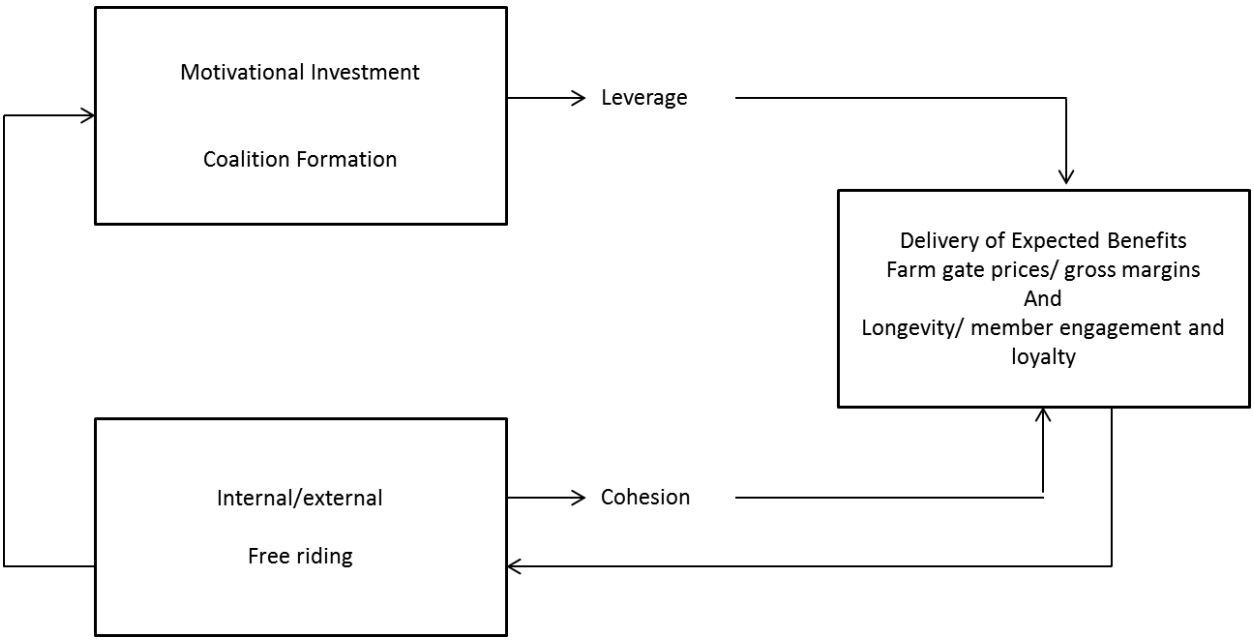
More successful cooperatives are seen to be those that ensure against free riding through the means of sanctions and incentives to ensure conformance of individuals to coalition goals (Hariyoga, 2004, Sandler, 1992). These measures are seen to be effective if they can reduce the disparity of interests between members and managers and foil attempts to free ride (Cook, 1995; Harkelius, 1999; Harvey and Sykuta, 2006).Where this fails, it is perceived to threaten the cohesiveness of the cooperative and loyal parties, within the cooperative, risk incurring increased costs.

Cooperatives may also have difficulty in responding rapidly to changes in market conditions (Turner, 1990; Cook, 1994; Cook, 1995; Hendrikse et al., 2001; Hariyoga, 2004). Democratic decision making, particularly where there is diversity of interest (Hendrikse et al., 2001), is laborious and inflexible and requires more time and effort to reach decisions than in alternative

governance structures. Furthermore, the reliance of *traditional* cooperatives on members' funds and loans for the sources of investment exacerbates the problem. This is of particular importance where the cooperative is attempting to diversify into multiproduct cooperatives, where there are higher demands for additional investment (Hariyoga, 2004).

This suggests, therefore, that the success of cooperatives is a two part interconnected problem. It is argued that, based on the existing literature, cooperatives cannot improve their leverage position where they are prone to free riding and lack cohesion. But there is a more fundamental problem in that without ensuring leverage and thus delivering financial benefits to farmers, cooperatives will be prone to freeriding and a loss of cohesion, ultimately reducing the longevity of the cooperative. This can be seen diagrammatically in figure 1.1.

Figure 1.1 – the interconnectivity between causes of success



1.3.4 .History of cooperatives in the UK

Paradoxically, whilst it was one of the earliest countries to set up formal cooperatives, in the 19th century, the UK's agricultural cooperative movement has had a weaker and more chequered history than its counterparts in mainland Europe and the USA. This fact has led to a greater interest by academics in the factors that have inhibited the development of cooperative action rather than those that influence cooperative success (Foxall, 1982; Rayner et al., 1987). Several reasons are advanced for the lack of farmer involvement in cooperative action. In the early development of cooperatives in the 1900s the slow development of cooperatives within the UK was attributed to the resistance of Landlords (Rayner et al., 1987) More recently the slow development of cooperatives has been attributed to the limited effective direct or indirect support from government bodies as well as limited access to financial resources, dissention from the National Farmers Union, and later on the establishment of Agricultural Marketing Boards (Morley, 1975; Foxall, 1982; Rayner et al., 1987).

This does not mean that there has been no cooperative action in the UK. From the mid-nineteenth century, a number of cooperatives were established to support agricultural sectors. The first cooperatives to be established in the UK were requisite cooperatives, but by 1890 there were over 30 cooperatives, which were designed to support the marketing of agricultural commodities. By 1920, there were 381 cooperatives that collectively held around one third of the market share and handled products from a third of all UK farmers. The number of cooperatives declined by 40% in the period up to the 1930s, a consequence of a series of

mergers between cooperatives and the consolidation of the sector in addition to some loss of membership[5] (Rayner et al., 1987).

However, numbers of both cooperatives and cooperative membership continued to decline over the following 3 decades, with a notable low in the early 1960s. By the mid-1960s cooperative numbers were 60% lower than in 1920. This position has subsequently been reversed and cooperatives have a notable presence in the market, and represent some 40% of farmers across agricultural sectors (Rayner et al., 1987).

It is also evident that UK governments have attempted to put in place measures to promote cooperation, of which there has been a succession, including the launch of the Agricultural Organisation Society in 1900 by Sir Horace Plunkett and the introduction of the *Development and Road Improvement Funds Act of 1909,* which supplied grants to support cooperative action. Membership numbers in 1920 were encouraging and by 1919 most counties in England and Wales had a farmers' society, but there is little research into the factors which contributed to the subsequent decline in members in the 1920s. By the late 1920s the UK Government had responded to the apparent failure of agricultural cooperatives, with the introduction of the Agricultural Marketing Acts of 1931 and 1933 , which heralded the producer controlled statutory monopolies known as marketing boards (Morley, 1975; Rayner et al., 1987).

[5] Member numbers only declined by 21%

Four marketing boards were initially set up to support the Milk, Bacon, Hop and Potato sectors. Initially they bought and supplied about 20% of the total value of the gross agricultural output of GB (Bauer, 1948). Other boards such as the Meat, the Egg, and Bacon marketing boards were established after the Second World War. Most of the boards, with the exception of the Bacon Board, survived until the mid-1990s. The presence of the marketing boards within many of the commodity markets removed the perceived necessity for cooperative action (Rayner et al., 1987). This position was accentuated by the introduction of, in post war years, measures that directly subsidised the activities of individual farmers, obviating any need for both collaboration and studies of factors that would lead to its success. Government subsidies safeguarded the farm gate price and offered grants for improvements to farming practices (Bower, 1985). The individualist approach of farmers was further enhanced on the entry of the UK to the EEC. Where research has taken place it has been largely descriptive (Morley, 1975; Murray, 1983; Rayner et al., 1987).

Research into cooperatives has taken place but has primarily examined the issue of success in workers', consumer, and requisite cooperatives (Foxall, 1978; Cornforth 1988, Perotin, 2004; Birchall, 2003). Even where consideration has been made of the state run cooperatives, also known as marketing boards, there has been limited consideration of success and even here this has been either descriptive or focused upon consideration of free riding (Empson, 1998; Frank, 2001).

Lessons can be learned from the European and USA experience, but what is apparent is that there is a dearth of research on the ability of the cooperative to redress power imbalances, other

than from the perspective of the problems of cohesion and cooperative longevity. This issue will be explored in more depth in Chapter 2.

1.4. Conclusion

This chapter has raised the question as to whether cooperative activity can effectively address the problems faced by the farming section in the UK. Cooperative action has been a keystone in the UK Government's policy response to the impact of changes to global policy and the UK downstream market structure on the viability of the UK farming sector. The policies recognise that a fragmented farming sector and highly concentrated downstream markets has created vast disparities in negotiating power between farmers and their retail customers. They also recognise that fragmentation makes it more difficult to identify market opportunities and alternative markets and have thus placed particular emphasis on the value of co-operation and collaboration, both horizontal and vertical, to redress these issues.

Yet, whilst membership of cooperatives has increased since the establishment of the EFFP, there is little evidence as to the value of cooperatives as a means of halting the decline of the UK agricultural sector. There is literature on the implications of governance structure on the effectiveness and efficiency of decision making and the availability of investment funds. However, given the thinness of the literature on the specific issue of traditional co-ops in the UK agricultural sector and increased leverage, this thesis fills an important gap.

CHAPTER 2

LITERATURE REVIEW –DETERMINING THE SUCCESS OF COOPERATIVES AS A BALANCING MECHANISM

2.0 Introduction

The first chapter outlined the UK and European agricultural policy framework and the emphasis placed by the UK government on cooperatives as a mechanism to generate countervailing power when faced with the changes to global agricultural trade policy and increased consolidation within the downstream market players. Following the Uruguay agreement, farm incomes have suffered from the joint impact of the removal of intervention and support mechanisms and the increased power of the downstream markets as result of consolidation of the retail sector. The EU and UK policy makers have responded by seeking alternative mechanisms based on market dynamics to develop a sustainable farming sector. At the start of chapter 1, despite the limited development of cooperatives in the UK historically, the UK government appears to have pinned high hopes on cooperative action as a vehicle to enable a highly fragmented farming sector to improve its leverage.

Chapter 1 has further indicated that the purpose of this research was to explore the likely effectiveness of cooperatives and to this end this thesis has suggested that any exploration of effectiveness was a two part puzzle. In the first instance the ability of cooperatives to be successful is dependent on whether they have the ability to provide members with leverage when faced with current downstream power structures. Secondly, the effectiveness of

cooperatives also depended on the ability of the cooperative to maintain cohesion and integrity, which was linked to their ability to manage the free riding problem. Finally, it has been suggested that these two themes might be linked. This is to say that the ability of cooperatives to deliver benefits to members may undermine their integrity/cohesion, and conversely the failure of cooperatives to maintain cohesion may inhibit the delivery of benefits.

The purpose of this second chapter is to explore the first part of this argument in some depth. This chapter does this with reference to *Power Dependency Theory* as originally developed by Emerson. Emerson argues that the ability of an actor or organisation to generate benefits is linked to the structural power relative to the exchange parties. This in turn is a function of two factors, the first of which relates to the choices or options facing the exchange partner. The idea is that the greater the range of choices enjoyed by a party, the stronger the party's relative power. The second factor is what Emerson called motivational investment or status giving. This means that where exchange relationships become more important to the other party, there is a greater likelihood that favourable terms can be agreed. Where organisations lack both these attributes, Emerson examines the options or strategies open to them. Critically, this includes the option of coalition formation which in the context of this research equates to the formation of cooperatives.

The chapter organises the material in four broad sections. Section 1 examines existing literature on agricultural cooperatives and points to a research gap in terms of the value of cooperatives as a balancing mechanism. Section 2 introduces the subject of exchange upon which theories of power and dependency construct their analysis. Section 3 deals with the broad tenets of the

theory itself. Section 4 applies the broad principles of power and dependency theories to the business environment context. The chapter concludes by pointing out the limitations of *Power Dependency Theory* and indicates that whilst the theory is useful, it is incomplete because it fails to deal with the internal group dynamics and how they undermine the collective ability to deal with vertical inequalities.

2.1 Insights into existing literature on the effectiveness of cooperatives in the generation of financial benefits

It becomes apparent that the major concerns of existing literature focus on the cooperative governance structure and the implications of the problem of collective cohesiveness for the nature and effectiveness of decisions. The key issue is whether the cooperative can adapt to market changes given the internal dynamics of the collective entity, and, as such, draws heavily upon concepts of common and public goods (Olson, 1965). Few have questioned whether consolidation or the development of added value products actually has the potential to improve the leverage position of farmers (Staatz, 1987; Goodhue et al., 2011; Russo et al., 2011).

The literature recognises that the success of the cooperative is dependent upon its ability to expand the market share (Guillouzo, 2003), thereby generating higher returns to farmers (Hanson, 1996). Evidence suggests that they often fail after a few years (Cook, 1995; Hanson, 1996; Hind, 1997; Hardesty et al., 2004). This has been attributed to their inability to control the aggregate supply when faced with the opportunistic behaviour of non-cooperative firms whose pricing strategies are deliberately designed to undermine the cooperative (Cook, 1995).

Open membership in cooperatives has been said to be a contributory factor in the ability of the cooperative to close the market (Staatz, 1987; Boland et al., 1999). Even if cooperatives succeed in attaining monopolistic position, they are often unable to impose constraints on the volume of the product for sale, which inhibits their control over price. Where the cooperative is able to have control, the volume delivered by members, higher prices attract new members, with the accompanying increase in volume and decline in farmgate prices (Hansmann, 1996). In situations where prices are low, members will defect to alternative buyers, thereby undermining the market power of the cooperative. Others have suggested that even in closed member cooperatives, where the numbers of members permitted are restricted, farmers have a strong incentive to expand production beyond the level that will ensure monopsonistic rents (Youde and Helmberger, 1966), even though the evidence suggests that closed membership policies are a more conducive means of attaining market power (Youde and Helmberger, 1966; Van Bekkum, 2001).

With the increased contestation within the food commodity sector at a global level (Vorley, 2003), the ability of cooperatives to increase farm gate prices is seen to depend on their development of international strategies, niche markets and/or, added value products (Kyriakopoulos, 2000; Nilsson, 2001; Van Bekkum, 2001; Bijman, 2010; Cavicchi, 2010). Some have questioned the impact of such strategies on farm incomes, given the power relations in the food sector (Cotterill, 2001; Bijman, 2002; Hariyoga, 2004; Hanf et al., 2011). However, despite the strong sense that cooperatives have failed to deliver leverage, there is little research and very few reported incidents of cooperatives who supply to highly concentrated markets, to substantiate this position (Van Bekkum, 2001).

Power Dependency Theory argues that coalitions are a key mechanism to adjust power imbalances. However, the concept has not until now been used to examine the cooperative problem. *PDT* suggests that cooperatives can potentially improve the financial position of farmers by increasing motivational investment and/or reducing the number of alternative sources of supply. In exchange relationships, Power dependency theories suggest that coalitions offer an opportunity to redress power imbalances (Emerson, 1976). Interestingly, whilst the Emerson framework underpins much of the power literature that examines exchange relationships between "firms", it has not been explored in the context of cooperatives.

The present project attempts to address this research gap. It is an issue of growing concern in a situation where farmers are faced with an increasingly contested food commodity sector (Vorley, 2003). The next sections of this chapter will, in the first instance, examine the market conditions where suppliers are able to leverage prices, before examining *Power Dependency Theory*, a theory that underpins much of the literature on competitive advantage (Emerson, 1976).

2.2 The basis of Business in Exchange

According to theories of economics and in particular neoclassical economics, trading or exchange is at the heart of business activities. The terms under which people are able to buy and sell ultimately plays an important part in determining their profitability. Neoclassical and classical economists believe that within efficient markets economic profits will return to zero. This means that they presume that all sellers are price takers, and explanations of relative business success are largely constrained to relative levels of efficiency. This position is at odds with the literature on business strategy that suggests that competitive advantage is central to business survival. Competitive advantage is seen to be dependent on the ability of a firm (cooperative or non-cooperative) to lever a greater proportion of the total economic value through the effective management of resource attributes whilst recognising those of its exchange partners (Galbraith, 1952; Porter, 1980; Peteraf et al., 2003). The literature on competitive advantage suggests that a firm can enhance its competitive position by inhibiting competitors, thereby increasing the dependency of the exchange party on the transaction. Where the dependency of their exchange party is increased, the firm is able to increase their share of the consumer price.

This dimension of competitive advantage and the distribution of surplus can be clearly modelled through *Power and Dependency Theory* (Emerson, 1976), a theoretical framework that underpins much of the existing literature on business strategy. The next sections will examine in more detail the conventional economic theory of perfect markets, prior to examining the

limitations of such theories in understanding imperfect, highly concentrated markets, and will examine alternative ways of exploring the distribution of economic surplus.

2.2.1 Cooperative and competitive surplus value

In order to demonstrate the effect of market imperfections on the distribution of prices in an exchange relationship, this section returns to the basic principles. Many economists believe that the interests of buyers and sellers both coincide and are in conflict (Hirschleifer et al., 1998). The coincidence of interest in exchanges is derived from the fact that both parties need or desire to participate in the exchange process and thus require the resource offered by the other party (Blau, 1986). This is because parties are mutually dependent in that the process of exchange enables increased opportunities for consumption/acquisition (Taussig, 1911; Weber, 1947; Kuhn, 1963; Hirshleifer et al., 1998; Acemoglu, 2003).

It is thus important to note that the exchange process requires a coincidence of will to exchange and indeed if both parties do not share an *effective preference*, a degree of capacity to exchange objects, plus the will to exchange, then no exchange will take place (Kuhn, 1963). It is considered that the coincidence of will and conflict of interest within exchange is a key concept in economic studies of market imperfection.

Studies of markets indicate that the determination of price is contingent upon the relative utility and scarcity of the product of exchange for each party, and is a function of the availability of alternative sources of supply or demand, and the relative importance of the exchange (Marshall,

1923; Walras, 1954; Stigler, 1953; Tirole, 1988; Hirshleifer et al., 1998; Cox et al., 2002). The presence of alternative sources of supply and demand and different utilities will have an impact on how value, and indeed risk, are distributed in the exchange relationship and determine which party will attain the greater gain. In taking this position, the thesis is in effect distinctive from both the Marxian perspective, where interests in exchange relationships are seen to be diametrically opposed, and at the other extreme, concepts of socio-embeddedness where it is held that all transactions take place in a social context (Granovetter, 1985), a concept which reflects that of social *bonds* found in a much earlier examination of exchange (Mauss, 1922).

2.2.2 Conventions in Business exchange

In any given situation of scarcity, resources have to be allocated and it is the allocation of resources between competing demands that gives rise to a utility function and thus the distribution of value between the buyer and seller. In order to determine how value or what is often known as economic surplus is distributed, it is important to recognise the relative value of the exchange to the two parties. In the concept of perfect markets, an ideal market, in which many buyers are motivated to maximise utility and many sellers selling homogenous products are also motivated by self-interest and operating from a position of perfect/complete information, neither party are able directly to influence the market price. However, the homogeneity of products means that buyers can freely move between suppliers as each supplier attempts to improve their market share.

In these conditions, neoclassical economists hold that price is ultimately determined by the costs of providing the product and the marginal cost of production. In the long term, a firm must recover its costs and will not take less for its products than it costs to produce. Hence, it will not accept less than the additional cost of producing an extra unit of production. That is the Marginal Cost of Production = the Marginal Return (MC=MR).

If any firm, cooperative or non-cooperative, attempts to improve returns above the marginal cost of production, in these conditions they will be easily substituted by the buyer. This means that ultimately the balance of surplus/gain will be in the hands of the buyer. Any improvements in the cost of production will result in corresponding increases in buyer/consumer surplus. As an aside, the marketing cooperative is faced with an additional problem, in that in order to generate financial benefits to its farmers it must deliver higher than average prices than its competitors.

The interrelationship between the relative utility of buyers and sellers and its implication on price, distribution of economic surplus and volume can be represented by the Edgeworth Box. The box is made up of the conjunction of two sets of indifference curves representing the utility function of the two parties undertaking the exchange, which illustrates the number of units of y an individual is willing to exchange for X. In the case of the buyer (A) this would be the amount of money Y they would be prepared to dispense for a volume of a good X, whilst for the seller B, this would mean the amount of the good X that they would prepared to sell for a given sum Y.

As illustrated in Figure 2.1., in the case of individual A, higher levels of ordinal utility are experienced the closer the amounts of Y and X are to the point of origin Ob. Correspondingly, levels of utility increase for individual B in line with the proximity of the point of exchange to Oa (Mercuro et al., 1997; Hirschleifer et al., 1998). However, whilst the ordinal utility of B is greatest at Oa for a given amount of X and Y, exchange at that point is not in the interest of A. Gains for both parties exist at a point where both A and B are able to enhance their respective utilities. This occurs inside the lens, *trading lens* that encloses the intersection of indifference curves a1 –a3 and b1- b3. This is a zone containing all mutually beneficial trading possibilities for both parties. It suggests that there is a range of prices between which the buyer is indifferent and thus will not influence demand (Marshall, 1923; Stigler, 1953; Hewitt, 1976; Kreps, 1990; Mas-Colell et al., 1995 p. 315; Mercuro et al., 1997; Hirschleifer et al., 1998). Yet, whilst the Edgeworth box demonstrates that any offer within the shaded area would be subjectively acceptable to exchange parties, the point where both parties could gain the greatest maximum joint benefit, as indicated by the line a2-b2, is known as the *contract curve*, and this will normally determine the position where exchange will take place. The length of the line a2-b2 may be taken to represent the amount of benefit attainable through that exchange. Point F however is the point at which moving in any direction either towards Oa or towards Ob, individual B or individual A will gain a smaller share of the economic surplus. Point F is said to be the pareto-optimal and any move away from this point will reduce the utility of one or other party. However in the context of negotiation it is in the interest of each party to move away from the pareto-optimal in order to improve their utility. In perfect markets, the presence of alternative suppliers means that the price will shrink and A or B, as the cooperative, will be located close to point F.

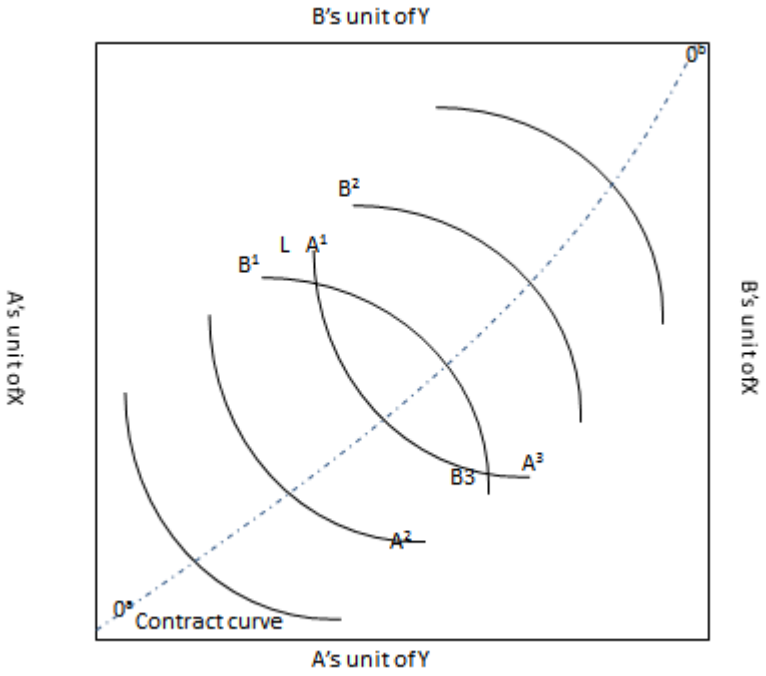


Figure 2.1. : Distributive efficiency as illustrated by the contract curve

Whilst the Edgeworth box offers a determinate explanation of the range of values in perfect markets, it provides little insight into how and why price is arrived at within an exchange relationship, and falls short in explaining imperfect markets (Emerson, 1976). Unlike perfect markets, imperfect markets are characterised by natural or productive scarcity and incomplete information on supply and demand.

In imperfect markets the activities of the market are no longer controlled by a large number of players but control lies either with one powerful or a few powerful businesses (Zeuthen, 1930; Robinson, 1933; Chamberlin, 1933; Harvey, 1969; Hewitt, 1976). In such models of monopoly, the assumptions of perfect substitutes found in competitive markets are removed, thus enabling firms to avoid price pressures from competitors. Monopolistic firms, whether they are

cooperative or not, in contrast to the perfectly competitive firm, are able to set output and price simultaneously and will decide on output in order to maximise the difference between total receipts and total variable costs. The ability to fix a level of output presents the firm with the option of fixing price.

Where the explanations of economic theories falter is in the belief that monopolies, oligopolies and other forms of *market failure* are exceptional and products of extreme market rigidities (Tullock, 1964; Possner, 1974), a state that refers to the sluggish response of prices or to market excess or shortages. They fail to acknowledge the importance of power as a mechanism to explain the distribution of surplus between exchange parties. In the first instance, mainstream economists assume that monopolies are exceptional and unstable. Even though they are able to set prices over the short term, over the longer term, the existence of high prices represents a market signal to potential new entrants, with the net effect of driving down prices, resulting in profits tending towards zero. Monopolies and oligopolies are considered short lived, since competition serves as one of the three mitigants of economic power (Galbraith, 2007 p223).[6] Yet there would appear to be certain sectors where the conditions of sustained levels of concentration, such as the food retail and manufacturing sectors, run counter to classical constructs.

A further factor that prejudices economists with regard to the significance of power in determining the distribution of surplus is the dominance of the maximisation of the consumer welfare discourse (Galbraith, 1956; Dixon et al., 1995). Despite a burgeoning interest in power

[6]The other two according to Galbraith are the state and countervailing power.

across disciplines including sociology (Lukes, 1974; Emerson, 1976;), philosophy (Giddens, 2001; Foucault, 1980), and business management (Porter, 1980; Barney, 1991; Cox et al., 2002), the belief that market equilibrium and economic efficiency is attained when consumer surplus is at a maximum has blinkered economists and indeed marketing academics to the importance of power within exchange processes (Reicheld et al., 1990; Leverin et al., 2006).

Neither economics nor marketing academics have provided sufficient insight as to how an increase in surplus is distributed in imperfect markets (Gronhaug, 1979; Cox, 2007). Whilst it is apparent that in the context of the Edgeworth box, were individual B to be in a monopolistic party, the exchange would take place at a position located on the A1-A3 curve, this presents little insight into the distribution of surplus and the contributory factors.

In contrast, literature on the competitive advantage of firms, with an interest in the maximisation of value to the seller, has placed power and leverage at the heart of its approach. This is apparent within two key schools of thought. In structure, conduct and performance analysis, Porter (1980) specifically describes five threats to the power of a firm, including supplier and buyer bargaining power. Theoretical constructs from the more recent resource-based school argue that power is a central component of competitive advantage and contend that the power and thus competitive advantage is achieved through the acquisition of and thus denial to others of key resources (Penrose, 1959; Wernerfelt, 1984; Barney, 1991; Grant, 1991; Peteraf, 1993; Foss, 2003).

Even though some economists acknowledge the concept of power, few recognise its value in the understanding of the distribution of surplus in exchange relationships (Williamson, 1995). Whilst dependency is considered often to be an operational necessity (Williamson, 1995), imbalances of power, in situations where one party achieves more from the relationship than the other, are perceived to be an outcome of managerial incompetence. Williamson further suggests that there is a lack of rigour in the evaluation of the process through which power is delivered. The tendency to ascribe power to those who enjoy the advantage means that the concept is not only elastic but is also a tautological label for differences in resources in a system of bargain and exchange (March, 1988; Williamson, 1995; Cox, 2007). Williamson suggests that there is little doubt as to the explanatory value of power dependency theory in the allocation of surplus in exchange relationships, but there is an indeterminacy of cause and effect and difficulties of measurement and as such raises serious doubts as to its value as a theoretical framework.

However, he fails to understand that the real value of power/dependency theory lies in the idea that the outcome of the exchange is contingent on the interplay of two parties within the relationship. Unlike the position held in other economic constructs, in power/dependency theories how the determination of price is arrived at cannot be reduced to the analysis of the actions or characteristics of one party. Williamson fails to acknowledge that power is a relative concept and that in order to understand the impact on exchange, the situation of consumers and producers and their actions, including their ability to cheat/obfuscate, need to be analysed at the same time.

This simultaneous analysis of the relative position of each exchange party leads to an understanding of the interplay of available resources or assets that offer the unique competitive advantage. It is not the resources per se, but their relevance to a particular objective and circumstance. It is apparent that the relative leverage position is a function of the resource set, and each party's cognisance of their own resource set.

Economists are not alone in their failure to understand that the accumulation of certain internal resources of a firm offers a unique competitive position (Dierickx et al., 1989; Barney, 1991; Day, 1994; Okitemgil et al., 2000; Priem and Butler, 2001). Similar examples can be drawn from economic and political sociology. Emerson criticised early work on power on the basis of a failure to gain a real insight into human behaviour as their explanations tended towards equating greater power with personal characteristics (Rohrer, 1953; Dahl, 1957; Bacharach and Baratz, 1959). Indeed, even where authors drew upon the inter-personal determinants of dependency proposed in *PDT* (Emerson, 1962; 1964), interpretations defaulted to personal attribute conceptions of power (French and Raven, 1959; Wrong, 1968; Bacharach and Lawler, 1980; Ramsey, 1996). This can lead to the assumption that power is simply an outcome of individual or structural attributes, although, for power to be present there needs to be both structure and deployment. Parties within an exchange relationship may have comparable or distinctly imbalanced power attributes, but only in the use of such attributes is there a power and dependency issue. This has been expressed in the following terms, "Party A can be said to be using power if B gives A more of y than A gives B of x" (Molm, 1981, p. 43).

2.2.3 Alternative models of exchange

Whilst it becomes apparent that the major emphasis in mainstream economic literature has been on consumer welfare and the importance of economic zero to market efficiency, there is an alternative body of economic literature that examines the problem of allocation of surplus as an outcome of exchange. *Game Theory* has been utilised to examine a range of exchange situations and is often deployed to predict the equilibrium condition under which an exchange will take place. The classic *Game Theory* assumes that players have full knowledge of all possible courses of action or choices available and it is assumed that they will act or choose in such a way that will optimise their *payoffs* in the light of their prediction about the actions of the other party (Von Neuman and Morganstein, 1944).

Theories of games have been criticised, particularly those known as zero sum games, as they make a number of unrealistic assumptions, particularly about perfect information, cardinal utility and the diametric nature of interests (Harsanyi, 1977). Further problems have been recognised with regard to specific problems associated with the empirical testing of *Game theory* (Colman, 1982). One of the key problems identified is that it is a fundamentally prescriptive model that examines what players ought to do, not what they do, and, despite claims that the strength of *Game theory* lies in its mathematical rigour, it is often believed that *GT* provides no insight into the human response to problems of interdependent choices (Wagner, 1975), and it merely maps choices.

N person game theory has been utilised to examine whether the diverse stakeholders can agree upon a set of joint benefits, and decide upon the allocation of benefits and costs in a form that ensures cohesion (Staatz, 1983). It offers a way of examining the resources available to parties whose interests are both coincidental and in conflict (Axelrod, 1984). None the less, it provides an unrefined explanation for the distribution of surplus between two parties, and offers a limited insight about why some parties receive greater benefits from the exchange situation than others. The next section goes on to describe and examine the theory of Power and Dependency, which provides a more suitable framework for our purposes.

2.3 What determines distribution of value in *Power Dependency Theory*?

More than the previously discussed theories, Power Dependency theories present us with an important means to understand the allocation of surplus within a supply chain. The central idea in *Power Dependency Th*eory is that the allocation of benefits depends upon the distribution of power between two parties that, in turn, is contingent upon the relative scarcity/availability of alternatives and the utility/motivational investment of the product of the exchange relationship (Blau, 1986, pp. 152-6). The concept of power is described as thus:

"The power of one party is dependent upon the level of resistance of the other, and the dependence of actor a upon actor b is directly proportional to a's motivational investment in the goals mediated by b and inversely proportional to the availability of those goals outside the a-b relation" (Emerson, 1962, p. 32).

As stated earlier, the exchange relationship may be defined in terms of the comparative degree of resource dependency of either party and suggests that the ability to leverage value is a function of the resource set (Aldrich, 1979). It is therefore important to understand the respective resource set of each party in order to determine the outcome of the exchange process (Emerson, 1962; 1964; 1976; Cox et al., 2001; 2002; Cox, 2004).

Resource sets may thus be conceptualised as a mechanism or attributes through which a business can influence the perceived scarcity and utility of the product of the exchange relationship. In this light it is evident that resources have been conceptualised in a number of different ways. Some of the earlier examinations of power relations within business literature (Martin, 1971; El-Ansary and Stern, 1972; Robicheaux et al., 1976; Etgar, 1979; Dwyer and Walker, 1981; Anderson and Narus, 1984; Reve et al., 1986; Arndt, 1993), drew upon resource sets (sources of power); under the headings of coercive, legitimate, referent, expert, reward, and information, from the typology characterised by French and Raven (1959).

Yet inherently this literature examines the "sources of power" as mechanisms to resolve the issue of conflict and power struggles in order to ensure effective channel performance. In essence, marketing channel literature suggests that power imbalances are inevitable and that effective coordination of markets is contingent upon the subjugation of the weaker party. This mechanism of submission is denoted as a cost reduction in *Power Dependency Theory*; Emerson notes that in general it is a process that involves a change in values that reduces the pains incurred by the weakest in meeting the demands of the more powerful (Emerson, 1962, p. 35).

More recent literature in business management, as illustrated in figure 2.2, has explored the nature of critical resources/assets deployed by firms to generate the dependence of the other party. These may be broadly represented as market based properties or properties intrinsic to the organisation.

In the first instance, in terms of *Industrial Organisation Theories*, the ability of one firm to outperform another is linked to the structural conditions of the industry sector (Bain, 1956; Porter, 1980; Schumpeter, 1942). The power position and the ability of the firm to influence the structure of the industry are determined by its resource set (McWilliams and Smart, 1995; Thomas and Pollack, 1999). The dominant parties are those who can effectively exploit the lack of potential competitors, inhibit new entrants and the mobility of rivals, and limit the relative importance of both suppliers and buyers. Such a result is achieved through the creation of appropriate resources such as economies of scale and through absolute cost advantages, product differences, property rights, technological uniqueness, informational complexity and the construction of switching impediments for their buyer/supplier.

Alternatively, as also seen in figure 2.2, within resource based views, firm performance[7] depends upon the heterogeneity and immobility of internal resources (Priem et al., 2001). The list of identified resources has included tangible resources such as finance, types of capital equipment, qualification profile of employees (Hofer et al., 1978), less tangible resources such

[7] It is again suggested that this is pertinent to both cooperative and non-cooperative firms

as skills, experience, brand reputation, and networks (Wernerfelt, 1984; Hall, 1989; Williams, 1992; Fahy et al., 1999).

More recent examinations of power have suggested that the possession of critical assets/resource sets does not necessarily mean that the firm can achieve market closure. The realisation of closure is contingent upon the ability to utilise these resources. Effective use of these resources may depend on how far the manager is able to understand how resources may be deployed to the benefit of the firm and the value placed on the exchange by the other exchange partner (Farjoun, 1994). As indicated previously, the determination of a power/dependency relationship is contingent on the deployment of resources of either party. The possession of resources doesn't necessarily result in a dominant position.

Figure 2.2 shows a range of ways in which resource sets have been classified. The main thrust of the arguments within this body of literature is that resource sets inhibit imitation, substitution or market entry through the "tacitness" or lack of information on the competences involved (Reed and DeFillippi, 1990). Lippman and Rumelt (1982) identified specific cognitive or informational resources such as uncertain inimitability, search costs, information impactedness (Rumelt, 1984). Others identified inimitability (Barney, 1991; Amit and Schoemaker, 1993; Collis and Montgomery, 1995) and transparency (Grant, 1991). This leads back to the issue of conceived resources already noted, whereby the relative power position is contingent not only upon the understanding of the manager as to the resources available to counter act those of the other party, but on the ability of their exchange partner to hide, or manipulate information so to deceive.

This is a position held by Cox et al. (2002), whereby the determination of the power dependency relationship is contingent not only on the comparative level of resource sets and their relative scarcity and utility but on the manipulation of information as a power resource. In order to provide a more robust conceptualisation of the significance of scarcity and utility of resource endowments in buyer and supplier exchange, Cox et al. (2002) introduced the concept of objective and subjective interests. Based on precepts of bounded rationality (Simon, 1972) their theory distinguished between what was known and the actions taken by individuals and those which in objective terms were available. This enabled a more rigorous evaluation of power on the basis of both structure and action of each party.

The study of power from a subjective viewpoint examines those resources that either party deploys to secure their expressed preferences, but complies with the assumption that power does not exist if not enacted. However in combination with the objective view, it is possible to expand the analysis to take account of the extent to which the parties subjectively understand their own and the objective economic interests of their exchange partners, something that addresses the problem of tautology identified in earlier power literature (Williamson, 1995).

Schools	Authors	resource set	Resources
industry specific structure performance conduct	Day, 1994	market led transformation activities	e.g. manufacturing, logistics, other transformation activities, HRM NPD
	Porter 1980-1985	cost leadership differentiation focus	♦ mobility barriers , e.g. economies of scale, ♦ Entry barriers e.g. proprietary product differences and learning curves, differentiation of inputs, switching costs ♦ inhibitors to supplier power e.g. supplier concentration and importance of volume to supplier ♦ inhibitors to buyer power e.g. buyer concentration, ,access to distribution, ♦ Inhibitors to substitution, costs of entry, capital requirements, absolute cost advantage, government policy, informational complexity. Available substitutes, branding.
tangible resources	Hofer and Schendel, 1978	distinctive capabilities	financial, physical human, organisational or technical
	Wernerfelt, 1984	Entry barriers, resource position barriers attractive barriers	economies of scale, proprietary product differences, brands, switching costs, capital requirements, access to distribution, absolute cost advantage, proprietary learning curves, access to inputs, government policy
intangible resources and cognitive	Peteraf 1993	resources and capabilities	resource heterogeneity, exposte limits to competition, imperfect resource mobility, exante limits to competition
	Barney, 1991	resource heterogeneity resource inimitability	value , rareness, causal ambiguity imperfect inimitability, substitutability
	Amit & Schoemaker,1993	strategic assets	complementarity, scarcity, low tradability, inimitability, limited substitutability, appropriability, durability
	Rumelt, 1987	isolating mechanism	property rights, economies of scale, information impactness, causal ambiguity, reputational effects, buyer switching costs, communication good effects and collusive effects
	Reed and DeFillippi, 1990	causal ambiguity	tacitness, complexity and specificity

Figure 2.2: Summary of key literature on the nature of key resources

In conclusion, the issue of resource sets has been addressed from a number of perspectives, each of which has shown some evidence of validity (Schmalensee, 1985; Rumelt, 1991; McGahan and Porter, 1997; McGahan and Porter, 2003). What becomes apparent is that there is a need for a balanced view (Zajak, 1992) and a more holistic approach to the problem of assessing the power of each party in an exchange relationship (Ackoff, 1971; Schwenk and Dalton, 1991). Evidence from research shows that neither industry structure nor resource sets provide a complete explanation of profit rates across companies (Schmalensee, 1985; Rumelt, 1991; McGahan and Porter, 1997; McGahan and Porter, 2003). Indeed work on *Systems Theory* from the 1970s implies that it is the interaction between the two levels of analysis, the interconnectivity between firms and the industrial environment in which they are located, that determine the success of each party (Achoff, 1971; Gregory, 2001; Bauder et al., 2007).

The discussion in chapter 4 will explore how combining the frameworks of industrial organisation and resource based literature can offer stronger more appropriate measures or determinants of power in the context of *Power Dependency Theory*.

2.3.1 Emerson and Power

The influence of power dependency literature has been considerable, providing important insights into a range of research areas. Marketing channel literature has explored the negative impact of power struggles, stressing the need for "submission" of the dependent party to assure effective channel performance (El-Ansary and Stern, 1972; Etgar, 1979;

Dwyer and Walker, 1981), whilst others have examined the implications of balancing mechanisms on vertical supply chains and dyadic relationships (Cox et al., 2001; 2002). However, scant attention has been paid to the impact of horizontal collectives on buyer seller relationships and the allocative process (Philips, 1960; Galaskiewicz, 1985; Cox, 2004).

In order to examine the nature of horizontal relationships it is appropriate to return to first principles. A major insight found in *Power Dependency Theory*, but ignored within marketing channel literature, is the idea that parties are inherently unhappy with power imbalances. Emerson believed that the instability of unbalanced relations can be traced to a fact that, any use of power will by definition arouse psychological conflict in the recipient and, when power is not actually used, parties nonetheless feel vulnerable in their excessive dependency. The subject involved in an unbalanced relation is perceived to be keenly aware that the relationship is lacking what Homans has called distributive justice (Homans, 1958).

Emerson's work was designed to be a generic framework, which may be applied to a range of social relations and could be applied to small groups as well as complex relationships (Emerson, 1962). However, he also acknowledges that the conception of dependence as based on two variables, "availability and motivational investment", looks remarkably like the economic principle of supply and demand. The nature of Emerson's insight into balances and imbalanced relationships may be expressed as in figure 2.3.

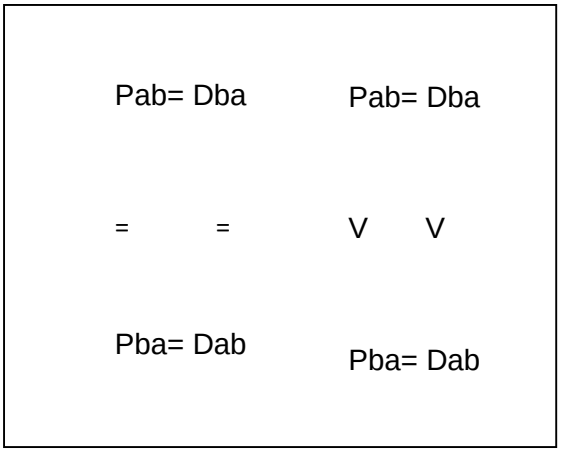


Figure 2.3: Representation of balanced and imbalanced power (Emerson, 1962)

In figure 2.3 above it is notable that balanced relationships are those where Pab= Dba and Pba=Da. This means that the power of a over b is equal to and derived from the dependence of b on a. This represents equal levels of power and dependence of each party. In balanced power relationships, the dependence of party b is "directly proportional" to that of the dependence of a on b (Emerson, 1962, p. 32) demonstrating equality of utility and scarcity of offerings between the two parties (Blau, 1964; Wrong, 1968; French and Raven, 1969; Luke, 1974; Bacharach and Lawler, 1980; Ramsey, 1995; 1996).

Alternatively, where Pba = Dba > Pab=Dab, this means that the power of one individual is not neutralised by their dependence on the other. Therefore the theory suggests that the relative power/dependency of each party results in either balanced or imbalanced power/dependency relations. This means that the relative dependency of each party on the resources of the other results in one of three power dependency relationships (Emerson, 1962; 1964; Wrong, 1968). As identified in figure 2.4 there are three key power positions.

These amount to an equality of power and dependency, a state known as incursive, plus two integral conditions, the dominance of a over b and the dominance of b over a.

Pab= Dba V V Pba= Dab (integral)	Pab= Dba = = Pba= Dab (incursive)
	Pba= Dab V V Pab= Dba (integral)

Figure 2. 4: The Emerson power matrix 2.3.2 Balancing mechanisms

Emerson's particular contribution to the field is his thesis that imbalanced relationships are in the main undesirable and that there are four potential mechanisms through which dependent parties may redress power imbalances. In his essay, Emerson does acknowledge that the dependent party could submit to the power imbalance, but points to a number of means by which the unbalanced power relation can be redressed. In short these amount to redressing the imbalances by increasing motivational investment or reducing choice. As suggested earlier in section 2.2 etc., this amounts to increasing or decreasing supply or increasing or decreasing demand, as is illustrated in more detail within figure 2.5.

Figure 2. 5: Balancing mechanisms in exchange relations

	Decreasing power of A	Increasing power for B
Alternatives/ choice - consolidation	1. Decrease choice – for independent party	2. Develop more choice for dependent party
Motivational investment / status giving	3. Increase motivational investment for independent party	4. Decrease motivational investment for dependent party

Figure 2.5 shows that each party has two key means of resisting the power of the other party. A dependent party could either decrease their dependence on the more powerful opponent by decreasing the opponent's power or by increasing their own power. To decrease the power of the other party, they could either decrease the number of alternative suppliers or improve the functionality of the product and increase the motivational investment. To increase their own power position, they could increase their number of alternatives or decrease the importance of the motivational investment they have in the other party.

In his 1964 work Emerson summarised the four options as:

1. coalition formation – a means of decreasing the availability of alternative relations for the stronger parties

2. network extension- a means of increasing the availability of alternative relations for weaker parties

3. status giving- a means of increasing the motivational investment of the stronger parties

4. withdrawal- a means of reducing motivational investment on the part of the weaker parties

This means that Emerson's particular contribution to the field is the clarity in which he determines the factors which instigate change to the dynamics of an exchange relationship. His thesis that coalition's networks and status giving strategies were potential mechanisms to redress power imbalance is core to the thesis of the current research and indeed is apparent within the government policy. Government policy, as explored in chapter 1, places particular emphasis on the importance of increasing scarcity through consolidation of the supply base and of the value of increasing utility through the development of added value products. The next section will consider in the context of cooperatives the importance of these options as means of redressing farm incomes.

2.3.2.1 The cooperative as a balancing mechanism

In a sector where family farms are considered the most efficient business unit (Bijman, 2002), cooperatives have been identified as appropriate balancing mechanisms, offering the potential for leverage (DEFRA, 2007). Existing cooperative literature, drawing heavily upon neoclassical theories, suggests that cooperatives emerge in conditions of depressed prices or market failures that were often induced through excessive supply (Helmberger, 1964; Sexton and Iskow, 1993; Cook, 1995; Nilsson, 1999). Market imperfections can be traced to the imbalances associated with respective optimum efficient sizes of farms in comparison with both upstream and downstream parties, as well as disparately high levels of investment (Friedland, et al., 1981; Goodman, et al., 1987; Bijman, 2002; Bruinsma, 2003; Aksoy et al., 2005).

As indicated earlier, the development of cooperatives can be seen to generate two key countervailing functions: of coalition formation and increases in motivational investment through status giving activities, both of which are anticipated by Emerson's power dependency framework. We now look at this in more detail.

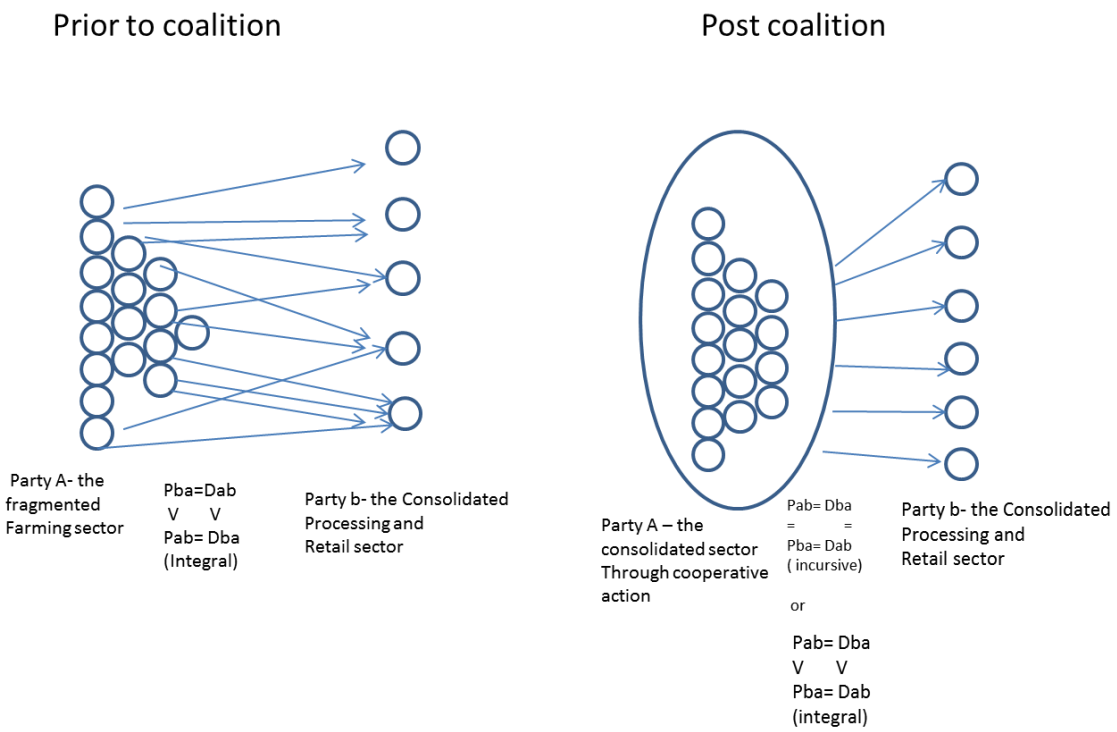
2.3.2.1.1 Consolidation – through coalition formation

In the case of the consolidation of supply through collective effort, leverage is generated by the reduction of choice, increase of scarcity, to customers. As discussed in chapter 1, historically, the literature on cooperatives has examined two leverage positions which emerge from the consolidation of supply. The first leverage position reflects an absolute/partial monopoly and is known as *countervailing power where* the effectiveness of the cooperative is dependent on the percentage share of the supply base held by the cooperative. It is worth noting that "countervailing power" cooperatives are effective where there are both monopolies and monopsonies.[34] In the second instance, the *yardstick* cooperative (Nourse, 1945; Bonus, 1996; Szarbo, 2002) is of value to farmers in that its presence or the mere threat of entry is said to force competitors to offer reciprocal pricing (Sexton and Sexton,1987) that leads to greater efficiency and the correction of market prices (Helmbergers, 1964). Such strategies are seen to be particularly effective where there are conditions of market shortages (Hendrikse and Veerman, 2001; Cook, 1995; Fulton, 1999; Beverland, 2006).

[34] This point will be explored in more depth in section 2.3.

The Power Dependency Theory predicts that the balancing operation can be found in *coalition formation*, reducing the ability of the dominant party to seek gratification elsewhere, thereby creating a climate for the delivery of fundamental transformation and enabling farmers to become price makers (Hendrikse, 2004). In theory, in context of the UK food supply chain, the consolidation through cooperation should enable a cooperative to restrict supply and reverse their power position. In figure 2.6 below, it is apparent that prior to collective action there is a multitude of farmers supplying into but a few multiple retailers and processors. Through consolidation, as proposed by Emerson, there would be one party, a collective of farmers who would supply into a greater number of buyers and thus redress power imbalances.

Figure 2.6: The impact of consolidation through coalition after Emerson



However, the critical issue in the context of cooperatives is whether the collective condition generates sufficient leverage to countervail the purchasing advantage of downstream players to an extent that ensures greater economic returns, if not monopolistic rents. It might be suggested that the larger the size of the cooperative the more effective they are (Cook, 1995). None the less there is an issue as to whether a sufficient supply base exists to ensure effective leverage. If examined in the context of the ability of the cooperative to increase the resource dependency of their buyers, it can be seen that this depends upon the extent to which they can achieve economies of scale, and their ability to inhibit the entry of competitors or restrict the market conditions of buyers, suppliers and competitors. Their ability to achieve any of these is restricted both by their governance structure and the structures of the markets in which they operate. Their ability to both restrict supply and achieve economies of scale is inhibited by their failure to control volume where they are obligated to accept all produce supplied by their members.

2.3.2.1.2 Differentiation- increasing motivational investment - status giving

The UK policy suggests that the cooperative may also generate increased value to its members by producing added value products, an example of the use of collective action as a *status mechanism*, by which they can increase the motivational investment of buyers. This may be achieved by increasing the operational importance of the product to the buyer by improving functionality and/or by increasing its commercial importance through augmenting the product's reputational effect (Arcas et al., 2003; Edwards et al., 2005; Beverland, 2006).

While government policy has emphasised the importance of developing value added products, the ability of a cooperative so to do is conditional upon the extent to which brand or product specificity can increase the resource dependency of the other party. In the light of current market conditions where manufacturer brands do not generate a sufficient point of differentiation for competitive advantage (Buttle, 1996), their value as counter levers may be limited, however they will nevertheless require some considerable investment to deliver. The issue of consideration is whether the product is inimitable and heterogeneous and whether the development of such products would prevent the *withdrawal* of the buyer.

With the growth of retailer own brands, which have become a strong competitor against those of the manufacturer, the situation is even more problematic. This is particularly so where property rights remain firmly in the hands of the buyer and new product development costs and the costs of increased functionality represent significant asset specific costs to the cooperative. Nevertheless Emerson's status giving concept proves us within a second potential rational for corporate effectiveness.

2.4 Weaknesses of the theory

Despite a certain level of criticism against the principle of power in business management and economics, the concept of power offers a valuable tool through which to examine the distribution of economic surplus between exchange parties. Yet, the strength of Power Dependency theories lies in their ability to explain the how and the why of surplus distribution.

The Emerson theory has certain limitations when addressing the research question, in that it fails to address the issues identified in existing research regarding the cohesiveness of coalitions. The dilemma in cooperative literature is twofold. In the first instance, collective action requires a common interest. In the second, collective interests do not necessarily produce collective action. One key academic in this field, Olson, indicated that the pursuit of individual rationality may be counter to collective interest (Olson, 1965). Even when there is complete agreement over the common goal, members may not choose to put in the effort in either time or investment for fear that their effort will not be reciprocated by other members of the collective.

The reasons for the break down between collective interest and action may be attributed to the characteristics of public goods, in that they are jointly supplied, but that it is also not possible to exclude those who do not bear the costs of the supply from the consumption of the goods (Runge, 1984). Olson argues strongly about the dangers to collective action from the free rider problem. He believes that if parties cannot be excluded from obtaining benefit from collective action, irrespective of their level of investment there would be little incentive to contribute. If all members failed to contribute then collective action would not take place and no-one would benefit. The problem lies in the conflict between self-interest over the collective. This position can be seen to be all the more poignant where cooperatives are required to make significant investments in order to compete in current markets.

This suggests a weakness of *Power Dependency Theory*, in that it offers little insight into the fragility of the collective action in the context of power. If an individual is to act in self-

interest, and the other party is in full recognition of this fact, then there is considerable incentive for a party to undermine the position of the collective.

2.5 Conclusions

This chapter has examined the theoretical underpinnings of cooperative action with particular reference to *Power Dependency Theory* and argues that the concept of power, whilst unrecognised by neoclassical economists, has much to add to the understanding of the distribution of surplus between two parties. This is particularly the case in the context of monopolistic, duopolistic or oligopolistic conditions, where the distribution of surplus can be linked to the relative resource dependency of one party upon the other.

There is considerable literature on cooperatives, particularly neoclassical and new institution economic models of the effectiveness of cooperatives as monopolies in conditions, where the potential for defection can undermine the monopolistic condition. However, the issue is whether cooperatives are an effective response to the crisis in farming. In this chapter the author has looked at the manner in which Emerson explains the government policy and its emphasis on cooperative action as a means of readjusting the balance of power within the supply chain. The chapter also has examined, in the context of economic literature, the arguments which have been put forward against the concept of power throughout its chequered history. In chapter 3 the author will examine the implications of internal and external free riding for the cooperative stability and longevity. This argument is drawn from Olson's work on "common *property*" problem (Olson, 1965).

CHAPTER 3

LITERATURE REVIEW- DETERMINING THE SUCCESS OF COOPERATIVES, COHESION AND THE INTERNAL AND EXTERNAL FREE-RIDER PROBLEM

3.0 Introduction

In the earlier chapters it has been argued, in the context of UK agricultural policy, that the effectiveness of cooperatives is likely to be linked to two key issues, a) the ability of cooperatives to act as a counterweight to the structural power of multiple retailers and b) the ability of cooperatives to sustain cohesiveness or integrity. Furthermore, it has been suggested that these two factors may be related in that the ability of the cooperative to retain members and cooperative cohesion will have an impact on the ability of its leverage position. Where cooperatives are unable to deliver leverage, cooperative cohesion may be threatened further. In chapter 2, the author started the examination of the theoretical underpinnings of cooperative action by assessing *Power Dependency Theory*. *PDT* provides a rationale for believing that cooperatives have the potential to improve the financial position of farmers by either increasing motivational investment or reducing the number of alternative sources of supply for buyers. However, it is evident that the *Power Dependency The*ory fails to examine the extent to which cooperative cohesiveness or lack of cohesiveness impinges upon the efficacy of cooperatives as a means of redressing power imbalances in vertical relationships.

The purpose of this chapter is thus to examine the issue of membership retention and cooperative cohesion in more detail. The chapter will specifically attempt to examine the idea that the decision of the cooperative member to engage with the objective of the cooperative is a calculatively rational decision. It is only rational for a member to continue to engage if the benefits delivered exceed the costs of delivery. Government policy is expected to deliver benefits such as higher farm gate prices, better margins and improved supply chain productivity; however, these benefits can only be delivered, in *traditional* cooperatives, after members have made a significant investment. These investments (or costs) include the obvious asset specific investments such as investments in physical, site, human, dedicated, brand and time, as well as additional costs associated with the free rider problem, including those stemming from the monitoring, lobbying and control of members and managers, the implementation of sanctions and the costs imposed on other members of shirking or freeriding. What makes this difficult to achieve is that benefits are non-excludable, thereby allowing some members to free ride, that is, that individuals will attempt to get the benefits without incurring the costs (Olson, 1965). Olson suggests that where many participants make the same calculation then the cooperative will lose effectiveness and risk decline. Cooperatives are thought to be at risk from internal free riding where cooperatives are larger and where members' individual actions are unobserved.

The function of this chapter is to explore the concept and implications of calculative rationality on the efficacy of cooperatives. The first section examines ideas put forward on calculative rationality, collectives and cohesion. This section includes the ideas of Olson in his seminal work on the *logic of collective action*, with reference to parallel literature. In the

second section, the author examines the literature on agricultural cooperatives. This draws upon the common property problem identified by Olson and examines the issue of how members can determine the costs of cohesion and how this may impact on cooperative cohesiveness. In the third section the author concludes and points the way to an integrated theoretical framework, encompassing both *PDT* and collective action theories, to be presented in chapter 4.

3.1 Olson, Common property and Calculative rationality

The precept that an individual is self-interested and in pursuit of individual gain is common to many economic theories, Yet, views on the consequences for collective action are varied. In classical and neoclassical economics the view is that individual action is to the collective good. That is, in striving to maximise his/own well-being the farmer will contribute to the well-being of all. In *Power Dependency Theory*, based on precepts that it is the fundamental propensity of humans to form and join groups (Simmel, 1950), the view is taken that if members of a group have a common interest, it is in the interest of the individual to further the interests of the whole. A third perspective is put forward by Olson (1965), who challenged conventional wisdom. Olson argued that the most rational option is the pursuit of individual interest but that in the context of a common or public good[35] it is not logical to assume that this will also be in the interest of the group (Olson, 1965; Ostrom, 1967; Hardin, 1968).Olson argues that:

[35]35 leading to utility maximisation

"Even if all of the individuals in a large group are rational and self-interested and would gain if, as a group, they acted to achieve their common interest, they will still not voluntarily act to achieve that common or group interest." (Olson, 1965, p2)

The reason for this viewpoint is that whilst collectives of individuals exist to further the interest of their members and will "perish" if they fail to do so, the non-excludability of public or common goods means that it is in the interest of the individual to let others pursue and bear the cost of the collective interest as they cannot be excluded from sharing its benefits (Olson, 1965, p. 15). This became known as the free-rider problem or the *tragedy of the commons* (Hardin, 1968). The failure to rescind individual interest over the collective can be seen to be a function of the desire to benefit from the public good without contributing to the cost.

This problem is more acute in larger cooperatives (Hariyoga, 2004; Sandler, 1992). Olson examines the problem in the context of perfect markets. He argues that, whilst it is in the interest of an industry to attain higher prices, which is a function of supply and demand, the delivery of higher prices is undermined by tensions between individual and collective interest. The common good, the higher price for industry, is undermined where individual firms follow their own interest of maximising production to a level where the cost of producing another unit equals the price of the unit. If the majority of or all firms increase output, the sector price would decline and each would attain a smaller profit (Olson, 1965. p 9).

However, where the cooperative is made up of a large number of farm businesses, the perception of the individual firm is that no-one will notice if they act in self-interest and do not contribute to the collective good, in this case withholding output to a level which maximises the industry price As a result, if sanctions or incentives are not offered to members of a group, then the individual interest is not to take the burden of maintaining the aggregate but to gain the benefit whilst others bear the costs. In such cases, they could prove to be even worse off than through maximising their own output (Olson, 1965; Reisman, 1990).

Large cooperatives, in which there is parity in the volume delivered by members, are particularly vulnerable to this free riding problem. However, in cooperatives in which there are extreme differences between the volumes supplied, amongst members the free rider problem is marginally attenuated. In such cooperatives the members supplying the greater volume are able to influence price through by, when required, refraining from maximising their production volume. Although they will bear a disproportionate burden of the cost of cohesion[36], their action would theoretically increase price and thus for these members the financial gain they receive should be greater than the total costs of collaboration, that is, the cost of operating at individual suboptimal levels for the collective good (Olson, 1965; Bland et al., 1999).

[36] The cost of cohesion sometimes referred to as costs of association means in this instance – the loss of income from not maximising revenue through minimising unit costs

Where the costs of cohesion are high, the free rider problem will not necessarily mean that collective action will not take place. It is acknowledged that collective action, particularly in large cooperatives, is unlikely to be sustainable (Olson, 1965). The impact of the calculative rationality of the individual is contingent either upon the visibility of the action of the individual or the employment of control mechanisms, either coercion or selective incentives.

In contrast, in small groups there is a greater likelihood of group consensus and group members are more likely to act in ways that are conducive to the common interest. This is because their behaviour is observable and manifest. This phenomenon is compatible with the axiom of self-interest, and is still indicative of individual calculative evaluation of the costs and benefits. In small groups, individuals, in a search for social acceptance and thus self-approbation, will act in the interest of the common good (Olson, 1965; Riesman, 1990).

This suggests that smaller cooperatives will be more cohesive and thus operate under lower costs of cohesion. The relationship would appear to be iterative in that the more coherent their objectives and interests, the more cohesive the cooperative membership will be. The more cohesive they are, the lower the costs of cohesion. The lower the costs of cohesion and the lower the risk of shirking costs, the greater the cohesion will be. Indeed, this has also been found to be the case in cooperatives, in which there has been considerable variance between the size of production volumes of members (Baland, 2004).

Costs of cohesion include the costs of implementing sanctions and incentives and also include the costs of monitoring involved parties, as well as the costs of group norming that

needs to take place within a multiple interest decision making body (LeVay, 1989). Costs will increase in proportion to size of cooperative, as well as homogeneity of size of membership. The presence of heterogeneous members within a cooperative is said to reduce costs of monitoring, control, incentives and sanctions to the cooperative as a whole (0lson, 1965).

These ideas have been heavily drawn upon by much of the literature on marketing cooperatives. In the next section, section 3.2, literature that examines the free rider issue in marketing cooperatives is explored. Ideas explored in this section will form the cohesion problem identified in the exploratory framework in chapter 4.

3.2 Examination of the issues in marketing cooperatives

Much of marketing cooperative literature suggests that farmers' perceptions of the value of cooperatives are dependent on the returns on investment to their farm business. Cooperatives will only be effective, it is said, if they deliver obvious financial benefits to each member. Research suggests that financial benefits are delivered when farmers receive higher than average returns at a low cost (Furubotn, 1972; Caves and Peterson, 1986; Boyle, 2004). Where the relative costs of achieving collective action are high and are perceived to rise above financial benefits, participants will be less incentivised to take the burden of the costs and will act opportunistically and often defect (Staatz, 1983; Staatz, 1989; Cook 1995, Katz 1999, Fulton, 2000, Stoel, 2002 Cook et al., 1999).

Research findings also suggest that members are averse to being required to contribute to the costs of investing into diversification strategies, technical developments and new product developments which are disproportionate to their benefit. This can make it difficult to raise funds for *traditional* cooperatives, and hinders the adaption of cooperatives to changes in the business environment (Cook, 1995; Harte, 1997; Van Bekkum, 2001; Cook and Iliopoulos, 2000; Chaddad, et al., 2002; Hendrikse et al., 2002; Bijman et al., 2003; Chaddad, 2003; Hariyoga, 2004; Bijman et al., 2005). In much of the research literature these problems have been articulated as *incentive problems*, that is to say, factors which undermine the desire to cooperate (Cook, 1995; Torgerson, 1999; Van Bekkum, 2001). Cook (1995) argues that these different problems increase the costs of transactions, including asset specific and agency costs.

The concept of *incentive problems* refers to four issues facing cooperatives. Firstly, cooperatives face incentive problems that are linked to the heterogeneity of membership, which is said to result in increased costs of transactions within the cooperative; costs associated with lobbying and negotiating. These *incentive problems* have been called decision and influence problems (Cook and Iliopoulos, 1999; Bijman and Ruben, 2005). Secondly, particularly in the face of increased investment costs, the potential for loss of cohesion increases in the face of what are known as *the horizon*[37] *and portfolio* [38]*problems.* These are seen to be of particular issue where members' shares have no secondary or appreciable value.

[37] this relate to differences between the actual period of investment and the period of time in which the member would benefit, that is to say the period time the member will benefit is shorter than the period of the investment
[38] the appositeness of the investment to the member's risk and business strategy

The third category of *incentive problem* is that of the *control problem* which relates to the costs of managing and controlling managers where incomplete contracts allow for opportunistic behaviour and where managers seek to maximise their own returns or those of a minority of members (Porter et al., 1987; Cook, 1995). Finally, cooperative literature has emphasised the costs of free riding or common property, as examined by Olson, which points to the problem where individuals seek to gain benefit without the costs of cohesion (Cook, 1995). The costs of cohesion can be represented in the following figure, figure 3.1 and can be represented in terms of direct costs associated asset specific costs, as well as the indirect costs of free rider and associate costs of transaction and agency as expressed within the Olson framework.

3.2.1 New Institutional Theories, costs to members and cohesion.

*C*ooperative incentive problems have been examined from a number of angles. One of the most prominent is from the perspective of *New Institutional Theory*. *New institutional approaches* applied to cooperatives have offered a detailed insight into the source of costs incurred by the incentive problem and have conceptualised incentive problems as a reflection of the disparity between the individual members' decision unit and that of the collective of a whole (Van Bekkum, 2001). Theories, such as *Transaction cost economics*, have been devised to formulate empirically meaningful optimisation problems by associating the utility function with the individual decision maker (Furubotn et al., 1972). In this instance, the individual member will make a calculative decision on the basis of the perceived individual benefits of cohesion versus alternative opportunities. Where costs of

cohesion for the individual are perceived to be higher than alternatives this will result in a reduction in cooperative cohesion as members defect. Thus attention has been paid to the nature of the costs.

First, such costs can be articulated in terms of direct costs of cohesion that have a net effect on the financial benefits of members as in asset specific costs. Second, there are indirect costs, and these can be seen as costs arising out of the internal and external free rider problem. These are expressed in figure 3.1 and examined in more detail in later sections.

3.2.2 Direct costs Asset specific costs and investments

Located in the body of literature on *New Institutional Approaches*, asset specificity is the term used to denote sunk costs or investments made to support a particular transaction that may not be redeployed elsewhere due to their transaction-specific nature (McGuiness, 1994; Williamson, 1975; 1985; 1986 1996, p59). The more transaction specific investments are, the more businesses run the risk of being subject to opportunistic behaviour, and as we will learn later in more detail, and have touched upon in chapter 2, the cooperative has risks of opportunistic behaviour or at least self-interest from both its buyers and members.

3.2.2.1 The nature of asset specific investment

Asset specific investment / cost has been categorised according to the nature of the resource. These initially included specificity of site, skills or manpower, physical non-site specific and investments dedicated to the delivery of the products (Williamson, 1996). These have more

latterly been extended to include brand and temporal specifics (Joskow, 1988; Masten et al., 1991). The nature of these is more fully described below:

1. Site specificity, which refers to the tie in of specific investment in buildings and technical equipment to a "customer". High levels of specificity would reflect significant impediments of relocation of facilities (Joskow, 1985). In cooperatives this could refer to storage or distribution facilities which are customer specific.

2. Physical asset specificity refers to the investment in physical assets such as technology or research and development which are not site specific but are specific to the requirements of the cooperative key customers' requirements (Joskow, 1985)

3. Human asset specificity- specific skills or knowledge to cooperative and cooperative customers

4. Dedicated assets- these will tend to be on or off farm investments. Which in the context of this study could be perceived to be investments in processes dedicated to the delivery of products to key customers

5. Brand name investment relates to investment made that is specific to a product or reputation

6. Temporal- concerns assets which have a value that will depreciate over time if not maintained – and could relate to the scheduling of activities contingent upon customer schedules

Historically, cooperative members contributed to asset specific investment through such costs as the cost of membership, marketing costs and any on-farm investment required to improve farm efficiency. Any additional investment required by the cooperatives for replacement of physical assets would be attained through the retention of the trading surplus. In current market climates, where the development of added value or branded products or increases of efficiency are required in order to compete, a member may incur higher asset specific costs, particularly where the cooperative is producing more bespoke products for particular markets. In this instance, dedicated asset specific investment may be made by the farmer and the cooperative in order to meet the requirement for improving the functionality of each of their customer bases. Product specification can vary quite considerably within commodity groups and customers.

3.2.2.2 The implications of asset specific investments

In increasingly competitive markets where cooperatives invest in processing facilities, asset specific investments are seen to rise as a consequence of their ill-defined property rights, a problem which is a consequence of the lack of a secondary appreciable share value in *traditional* cooperatives (Cook, 1995). Research has pointed out that the upshot of a lack of secondary value to shares is that where members perceive a discrepancy between their contribution to the collective asset specific investments and the individual benefits gained, they are increasing reluctant to contribute to cooperative investment. This reluctance can be related back to the incentive problems of *Horizon a*nd *Portfolio*, in that either the period of time over which they benefit from the investment may be shorter than its product life, or their own business goals fail to be promoted by the investment, which means they are

required to invest in suboptimal portfolios and may also be forced to accept more or less risk than they would prefer (Nilsson, 1997; Cook, 1995, p.1157; Borgen, 2004; Vitaliano, 1983).

In contested markets, this can lead to allocative problems both on and off the farm, particularly where cooperatives attempt to extend their market position. Where companies attempt to establish motivational investment there is a further risk that farmers will experience greater farm costs. The farmer may feel that investment in new brands or products is counter to his interests, but that he still incurs the costs of production[39]. Even if farms are able to meet changes to specifications or production methods, where products are easily imitable and buyers are able to switch suppliers, specific investment on the farm and, correspondingly, the impact on individual returns may be considered too high. This event may still occur even where the cooperatives can attain higher than average returns. This is because there is a requirement, particularly in traditional cooperatives, that members should take on the burden of asset specific investments. These conditions can lead to loss of cohesion and member defection.

3.2.3. Indirect costs –the common property problem

However, the costs of coalition are not only direct but can also be seen to be losses to benefits attained from cooperative action due to the non-excludability issue (Olson, 1965). As noted earlier, the concept of public and common properties means that whether or not

[39] This is reflective of the classic portfolio problem.

there are benefits to be generated from the cooperative, or asset specific investments and thus costs to members are lower than those of competitors, free rider or shirking problems may mean that members will seek to find other buyers or maximise their benefit from the common property to the long term detriment of the collective (Olson, 1965). Even where an individual has not contributed to the costs of cohesion, it is impossible to exclude an individual from partaking of the benefits. It is important to note that free riding can be from members and non-members. In each case, free riding means that a lack of investment of time, effort and money will mean that certain parties will attain benefits from the public good and the input of others, without bearing any of the costs.

In the case of internal free riders, as suggested earlier, there are a range of types of free riding. Olson suggests that these can be isolated into internal free riding through over production, internal free riding through non alignment of on-farm activities, and internal free riding through non-investment in off farm developments. In the case of internal free riding from non-investment in off farm developments, this form of free riding is a consequence of the fact that either a farmer joins the cooperative after the investment has been made or has failed to invest as an existing member.

A further type of free riding can be perceived to stem from the non-excludability of benefits to non-members. As seen earlier, one positive outcome indicated by the cooperative literature is that there may be net increases in prices awarded to farmers, whether members or non-members, as a result of the presence in the market of a marketing cooperative (Staatz, 1987). This is because the price established by the cooperative operates as a benchmark price

and inhibits the opportunistic behaviour of competitors and the threat to farmers of rock bottom prices. Yet, whilst farmers see that cooperatives may generate higher prices, they do not necessarily have the incentive to use the services of the cooperative, and will switch to alternative non-cooperative firms if prices are even higher.

3.2.3.1 Internal free riding

A predominant position held within the literature is that uneven distribution of costs results in member dissonance which can seriously undermine the stability of the cooperative. The internal free riding problem can be seen to be a consequence of the uneven distribution of asset specific, agency and transaction costs across members. Even if costs have been distributed equally among members, simply the fear that they may not be so can undermine the position of the cooperative.

3.2.3.1.1 Internal free riding through over production

Incidents of internal free riding through over production can be described as those where cooperative members, when attracted to the cooperative through higher prices, increase their volume of production to a level above the market equilibrium. As previously discussed, where price is higher than marginal cost of production, a farmer may find that it pays to increase output to the maximum. An essential assumption of this model is that each firm aims to maximise profits, based on the expectation that its own output decision will not have an effect on the decisions of its rivals. In addition, each farmer has knowledge of the total volume required and the volume produced by the other members.

These are the same issues as those previously examined in the context of both asset specific and transaction costs, but in parallel are perceived by members to be a substantive potential indirect cost. In such a case, the costs perceived by members were that if others were to maximise their output, prices would fall. In effect this represents a fear that they will bear a higher burden of the costs of managing the total available supply. Its presence may fundamentally undermine the collective coherence.

3.2.3.1.2 Internal free riding through non-alignment of on-farm activities

A further situation exists where farmers fail to adapt their own farm practices to meet the cooperative's allocative decisions. This failure could be a consequence of conditions outside the farmer's control[40] , but either way, may result in the uneven distribution of asset specific costs across members. In a similar situation, those who invest may experience or fear that if others do not do so, the returns available from establishing a differentiation strategy may be compromised.

Furthermore, even if this were not to be the case, many cooperatives effectively subsidise prices paid to farmers across products lines (Hariyoga, 2004), that likewise may be seen as an additional cost to the compliant farmer. Yet, where no cross subsidisation takes place, farmers who are unable to align due to constraints of terrain and climate may similarly feel that they have to bear a disproportionate cost of alignment, because they are inhibited from profiting from the increased benefits received by other farmers due to circumstances that are

[40] Such factors as location, size of farm, geology, climatic conditions and other natural factors that affect the productivity of farms.

simply a facet of their farm or other acts of nature. In cohesive collectives, any additional investment by farmers in their farm must have a corresponding investment by other farmers.

3.2.3.1.3 Internal free riding through non-investment in off farm developments.

In addition, as discussed earlier in section 3.4, there may be particular resistance to investment in cooperative development. This occurs for a number of reasons, including the belief by members that any increase in cash flow they will receive that may be generated by the asset is of a shorter duration than the productive life of the asset. This can emerge from a belief that the investment has been made in a market of a short lifespan, but is more likely to be a consequence of the age of the farmer and length of time in which he can personally benefit, particularly as there is increasingly a lack of succession within farming families, a problem previously referred to as the *horizon problem* (Porter and Scully, 1987, p. 495; Van Bekkum, 2001). This means that there is a perception that they will bear the costs for the benefit of others, which can prove to be a disincentive to investment, even were they to believe that in the short run the benefits they would attain would exceed the costs.

A similar issue may emerge where new members enter the cooperative. Whilst the investment by existing members may have generated conditions where new members were needed in order to meet expanding demand, existing members may resent past costs, the benefits of which are now reaped by new members who paid nothing to their achievement (Cook, 1995; Fulton, 2000).

Further disincentives for investment may emerge when membership expands and or where cooperatives allocate their resources across a range of differentiated product lines, arising out of the impact of increased heterogeneity on the perceived distribution costs in relation to the distribution of benefits. Such feelings may present a disincentive for investment. Members prove to be more antagonistic to investment where they are averse to the nature of the risk incurred and this is further exacerbated where there are disparities in risk aversion between members.[41]

3.2.3.2 External free riding

It is posited that the fundamental problem with cooperatives is that found in the context of many public goods, in that the benefits attained are non-excludable and non-rivalled. Even where the cooperative effectively closes the market through relative or absolute scarcity, the impact on prices benefits all members and non-members alike. This has been perceived to be a positive dimension of cooperatives. Within cooperative literature it is posited that if cooperatives were to disappear in an imperfectly competitive market, the power position of the remaining firms would increase. Nourse suggests that the power of the cooperative is that it can dispel monopoly power and maintain a "vigilant role" or a "yardstick operational position" (Nourse, 1945), thereby raising prices for the farming sector involved.

Yet there is little consideration given to the calculations of costs over benefits that could be inferred from principles of calculative rationality. It might be assumed that those who are

[41] This was referred to earlier in chapter 2 as the *Portfolio problem.*

contributing to the costs of the cooperative might resent the effect of their contribution of costs on the price received by the sector as a whole. Evidence would suggest that the simple presence of cooperatives in the market place, where cooperatives achieve some levels of scarcity, may result in the raising of prices by competitors (Gunnerson, 1999). Non-members would thus attain the benefits of the cooperative, without the costs. The logic of collective action would suggest that members would experience a level of dissonance in bearing the costs for others of achieving such price rises. The logic would suggest that the preferred action would be not to become members and thus allow others to bear the cost. If all were to do so then the cooperative would not be formed. Indeed, even were the cooperative to be formed, higher prices offered by competitors could be used to tempt farmers away, thereby undermining the ability of the cooperative to close the market.

Figure 3. 1: Costs of tensions between individual and collective interests

Costs of the cooperative to members – tension between individual and collective good	
Source	Costs
Direct costs	•
Asset specific investment	• Site specific – extent to which the site can be relocated post contract • Physical – assets to meet specific stipulations by the cooperative • Human-specific skills or knowledge held by cooperative and cooperative members • Dedicated – investment on and off farm in processes dedicated to key customers • Brand – investment specific to a product or brand • Temporal – assets which depreciate over time if not maintained
Indirect costs	•
the common property and free rider problem	Internal – • over production –costs caused by a decrease in price as a result of excess production levels by some or all members • Non-alignment additional–costs experienced by compliant members caused by compliant members who are not compliant • Non-investment off farm – failure or resistance to investment in processing, marketing and delivery systems, often due to problems such as horizon • External free riding – members bearing the costs of cohesion where the benefits are non-excludable to external parties
Transaction costs	• Metering/ monitoring costs –costs incurred in monitoring compliance • Lobbying –costs of negotiation, influencing opinions • Sanction and allocation- costs incurred in assuring compliance and loss of inefficiencies, where compliance measures fail • Shirking cost –cost of compliance for compliant members not incurred by non- compliant members.
Agency costs	Costs of monitoring and costs of failure to monitor managers

3.2.3.3 Implications of free riding

The literature suggests that the calculation of free riding costs by members, both internal and external, has significant implications for the longevity of cooperatives. Even where cooperatives are able to generate higher returns to farmers, fears of free riding may deter the members from acting in the interest of the collective. This in turn increases costs of cohesion for members. In addition to the increased costs of on and off farm investment, which as discussed earlier, research suggests could result in a perception by farmers that costs outweigh gains, with the corresponding negative impact on the availability of investment for cooperatives (Koller, 1953; Furubotn et al., 1972), there are further cost implications for cooperatives which emerge from the free riding problem. These are namely the increases in the costs of monitoring, control, sanctions, and shirking, alternatively known as transaction and agency costs as explicit within *New Institutional Theories*.

Transaction and agency costs associated with internal free riding will increase in line with heterogeneity of interest. Interests may become more heterogeneous where cooperatives are not only large but shift their emphasis towards diverse, multipurpose, differentiated products, issues of coherence and thus the costs of coalition experienced by members become more significantly to the fore. Although offensive investments strategies such as branding and value added processing have implications for many *traditional* cooperatives in terms of availability of funds, the choice of sources of funds, whether internal as in the retention of member patronage surplus and direct member investment, or external sources as in external

shareholders, B shares or long term loans are seen to have a disparate impact on the longevity of cooperatives [42] .

This next section examines in more detail the nature of the indirect costs of cohesion with reference to transaction and agency costs. In the first instance, this section will outline the implications of principles of common property as transaction costs as identified in *Transaction Cost Economics,* before examining asset specificity and agency costs and outlining the implications of common property as indirect costs incurred by cooperatives' members.

3.2.3.4 Transaction costs.

The concept of transaction costs relates to the inherent costs of undertaking lobbying, monitoring and searches, negotiating and developing and enforcing policy that arise directly from opportunistic behaviour (Klein, Crawford, and Alchian, 1978; Ouchi, 1980; Hechter, 1984; Barzel, 1989; Demsetz, 1988; Williamson, 1985). The transaction cost approach was developed in order to understand how the characteristics of a transaction affect the costs of handling it through markets, bureaucracies and other governance forms. Research suggests that both from the individual farmer and the collective position, cooperatives can attenuate transactions costs of marketing (Bijman, 2002: Sexton, 1986; Hakelisus, 1999).

Alternatively, there is more rigorous research that examines the transaction costs of the decision problem from the unit of analysis of the farmer (Cook and Iliopoulos, 1999), where

[42] The introduction of secondary value shares and external ownership as seen in the Entrepreneurial cooperatives has, it has been argued, ameliorated the free rider and thus cost of cohesion issue (Dahl and Dobson, 1976; Newman, 1983; Royer, 1983; Royer and Cobia, 1984; Caves and Peterson, 1986; Diaz-Hemelo et al., 2001),

it is suggested that the more disparate the collective the greater the costs. In cooperatives this is normally recognised as a function of the size of the cooperative and numbers of products supplied (Hind, 1997; Cook and Chaddad, 2004). This means that as cooperatives become larger and more multipurpose, transaction costs increase, leading to cooperative instability. Hechtor (1984) succinctly represents these costs in terms of lobbying, metering, sanction, and shirking costs.

These costs are explained in more detail in the following list:

a. The cost of lobbying relates to the costs of negotiating and influencing opinion and could be incurred in cooperatives by agents who are involved in influencing members and board opinion. These costs may be incurred largely by the board and members through networking activities.

b. Metering costs – these are the costs incurred in monitoring the compliance of individuals. The source of metering costs relates to the problem of actually accessing the individual compliance (Hechtor, 1984). In the context of the cooperative, the metering costs are incurred in monitoring the compliance of members to collective objectives. These costs are experienced both in terms of direct costs of time or effort by agents/members involved in the metering of members and the increased burden of costs on members arising from the costs of the additional effort. These may include information transfer activities relating to best practice, and members may be party to initiatives such as network groups designed to promote and discuss best practice.

c. Sanctioning costs and allocation costs stem from the deployment of resources in establishing mechanisms for compliance and the costs of administration incurred in the process of implementing mechanisms, both incentives and penalties, as well as the financial costs to the collective of the bonuses or penalties. Moreover, the loss of allocative efficiency, were the compliance measures to fail, would result in a loss of benefit to all members, which in effect is an opportunity cost to compliant members.

d. Finally, shirking costs are largely non-quantifiable but relate to costs of time, effort investment, which have not been incurred by non-compliant members but are incurred by those who have adapted farming practices to meet the collective objectives.

These costs are seen to rise in proportion to the disparity of member interest and increase as a function of the size of the cooperative and numbers of products supplied (Cook and Chaddad, 2004). This is particularly so where it is considered that there have been poor allocative decisions as a result of internal power balances and an inability of an individual member to influence the strategic and operational goals, (Hariyoga, 2004; Porter et al., 1987; Ferrier and Porter, 1991).

3.2.3.5 Agency costs

In the second instance, cooperative literature draws upon *Principal Agency Theory* to examine the problem of manager control. In this body of research, the question of the coherence between the management and member objectives and interests is often referred to

as the *control* or *follow up* problem. The agency issue is a function of the contract under which the cooperative members engage the manager to perform the service on their behalf. *Agency theory* suggests there are two potential sources of conflict in the *Principal-Agency* relationships and these stem from a potential non-alignment of managers' and members' objectives and levels of risk aversion. In both these instances there are costs in monitoring management activities, particularly those stemming from ensuring that managers act in the interest of the collective (Porter, et al., 1987; Sexton and Iskow, 1988; Klein et al., 1997; Richards et al., 1998; Hakelius, 1999; Iliopoulos and Cook, 1999; Gripsrud et al., 2000).

Whilst the *Principal/agency* problem is inherent within most forms of organisation, the risk of agency issues in cooperatives is more significant. In line with the principles of principal agent theory, where cooperatives have no external monitoring systems, such as external stakeholders, presumptions are that managers' x and allocative inefficiencies will follow. High administrative costs may be incurred due to lack of management competence or actions taken by the manager which are in their own interest rather than those of the cooperative members. Such costs could range from high sales costs, or the opportunity costs of poor decisions at a corporate, business or functional level that may result in lower returns than alternative types of governance (Katz, 1997; Katz and Boland, 1999; Hariyoga, 2004).

Furthermore, the dilution of ownership (Jenson and Meckling, 1976) means that costs accrue not simply as a result of reduction in potential residual claims but in the monitoring and control of the actions of managers. Explicitly such costs relate to the employment, the monitoring and the mechanisms designed to control management activity.

It is critical to note that the competence levels of cooperatives are contingent upon the recruitment of professional managers to which the low status and low payment packages of cooperatives in the business world has been traditionally a barrier. This has led to a lack of competent management as well as claims that managers fail to understand cooperative principles, (De Loach, 1962, Caves and Peterson, 1986; Lang, 1994; Cook, 1994; King et al., 1998). As a result, less competent managers have been perceived to have a lower understanding of operational and strategic decision making and financial management / reporting. Where managers are deficient in management skills and experience of both operational and strategic decision making, there are potential opportunity costs of ineffectual decisions (Sexton, et al., 1988; Howard and Klosler, 1991; Katz et al., 1997; Kyriapoulos et al., 1999; Bruynis et al., 2001).

Fears also exist that managers will experience no checks against acting in their own self-interest in the absence of the external control mechanism of share ownership. It is posited that as the cooperative expands there is increasingly less control over management actions, resulting in high administrative and sales costs (Hariyoga, 2004), which as discussed earlier is exacerbated in increasingly complex markets, where risk averse managers may be incentivised to sell goods and services at a price lower than that which maximises profit (Katz, 1997; Katz and Boland, 2000; Borgen, 2004; Hariyoga, 2004).

On the other hand, if competent managers are attracted through attractive pay deals and compensation payments, they risk being seen by members as opportunistic. Even where competent managers are employed, the extent of their control over member activities and

their ability to reconfigure internal competences may seriously inhibit their ability to attain motivational investment.

Such costs may be mitigated by the design of incentive programmes and compensation packages to align agent and principal interests (Richards et al., 1998; Hariyoga, 2004). However, even where such a strategy is implemented where members' interests become increasingly heterogeneous, additional high pay and incentives can be seen merely to add to the costs of coalition, and may encourage members to seek alternative "buyers".

In summary to section 3.2 the literature suggests that there are both direct and indirect costs of cohesion. Direct costs stem from the financial contribution made to cooperatives by members. In increasingly contested markets this contribution has become more significant. Additionally there are indirect costs which are incurred as a consequence of the free rider problem. These are two fold. In the first instance these are incurred as a direct consequence of the free rider problem. That is the loss of overall gain as a result of individual opportunism. In the second they emerge from the costs incurred by the cooperative from the monitoring, control and lobbying actions of members and managers.

3.3 Conclusions

From the literature it would appear that where cooperatives are seeking to achieve leverage, the success of the cooperative to deliver those benefits depends on the cohesion of the cooperative. A failure to deliver may be, as is suggested in chapter 2, a function of the power

dynamics within a supply chain. In this chapter it is also suggested that where the costs of coalition are high the cooperative may still fail to deliver, even where conditions are such that leverage might be achieved. As seen in figure 3.1 below, if costs are higher, or simply perceived to be higher, than alternative marketing channels then the cooperative will become unstable and possibly collapse.

Chapter 4 draws upon the past two chapters and concepts of power and dependency and free riding in order to develop an exploratory framework that will constitute the basis of the research. This means that chapter 4 is central to this thesis and will underpin the process of adductive and reproductive interpretation of the phenomenon found from interviews, published and unpublished data that informs the development of the case studies.

CHAPTER 4

THE EXPLORATORY FRAMEWORK

4.0 Introduction

The previous three chapters have outlined some of the factors that are likely to affect the success of cooperatives, as expressed in existing literature on cooperative action. These chapters have focused on two issues in particular. Chapter 2 has looked at the factors that are likely to determine the ability of cooperatives to deliver potential benefits in terms of farm gate prices and margins. This chapter has used insights from *Power Dependency Theory* and suggests that the ability to deliver benefits is a function of relative structural power. Cooperatives have been identified as balancing mechanisms, and have the role of either increasing the power attributes of the cooperative through reducing alternative sources of supply to buyers, or through increasing the dependency of buyers through increasing the utility of the product offered by the cooperative.

In chapter 3 it is suggested that in order to be effective cooperatives (in particular *traditional cooperatives*) must maintain the engagement or loyalty of members to ensure cooperative cohesion, in essence a function of a cost benefit calculation on the part of members, who will need to believe that the benefits they attain from membership will be greater than the costs. As suggested by key literature (Olson, 1965), it has been argued further that where the

benefits are non-excludable, this can give rise to free riding which will undermine the effectiveness of the cooperative as a countervailing power.

The purpose of this chapter is to bring together these two themes into a single exploratory framework. As discussed in chapter 1, the exploratory framework suggests that these apparently alternative explanations of cooperative success would appear to be intrinsically linked. Specifically, it is an intuitive underpinning expectation of this thesis that where cooperatives have proved unable to benefit through leverage, members' incentive to participate is reduced. Furthermore, where the cohesion of the cooperative is weakened this has an iterative impact on the ability of the cooperative to deliver.

The following sections outline the nature of the framework. Section 4.1 outlines the nature of the argument inherent to the framework, 4.2 outlines the leverage argument, 4.3 that of the cooperative framework. These two sides of the argument are brought together in section 4.4, in which the aims and objectives of the research are also outlined.

4.1 Summary of argument

This section briefly summarises the arguments within this chapter. The chapter is central to the research thesis as it outlines the framework that allows the investigation of the factors that determine cooperative success. The framework proposed in this chapter, as informed by the two bodies of literature, suggests that the problem is iterative. The success of the

cooperative depends on the ability of the cooperative to provide leverage and thus financial benefits, but continuous delivery of leverage is in itself dependent upon its cohesiveness.

The basis of Emerson's *Power Dependency Theory* is that cooperatives can improve the financial position of farmers by increasing motivational investment or reducing the number of alternative sources of supply for buyers, but, because of the free rider problem, leverage is also contingent upon the continuity and cohesiveness of the cooperative. It is possible to come to the conclusion that a cooperative that is providing leverage would be more likely to be successful. Where cooperatives are neither cohesive nor can generate leverage, it is suggested that they will fail. However, it is possible that even if cooperatives are cohesive they may not improve the farmer's lot and even if a cooperative provides leverage the tension between individual and group interests can undermine the success of the cooperative. It is proposed that success is contingent upon the ability of the cooperative to both have sufficient power attributes to generate financial benefits from members through leverage and to operate cohesively. This can be seen in figure 4.1 below.

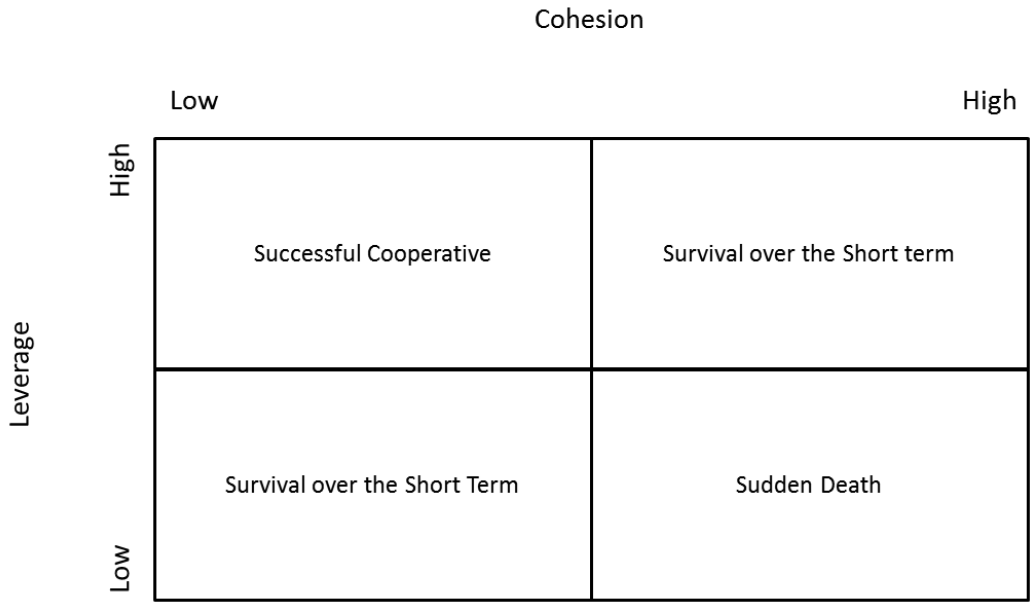
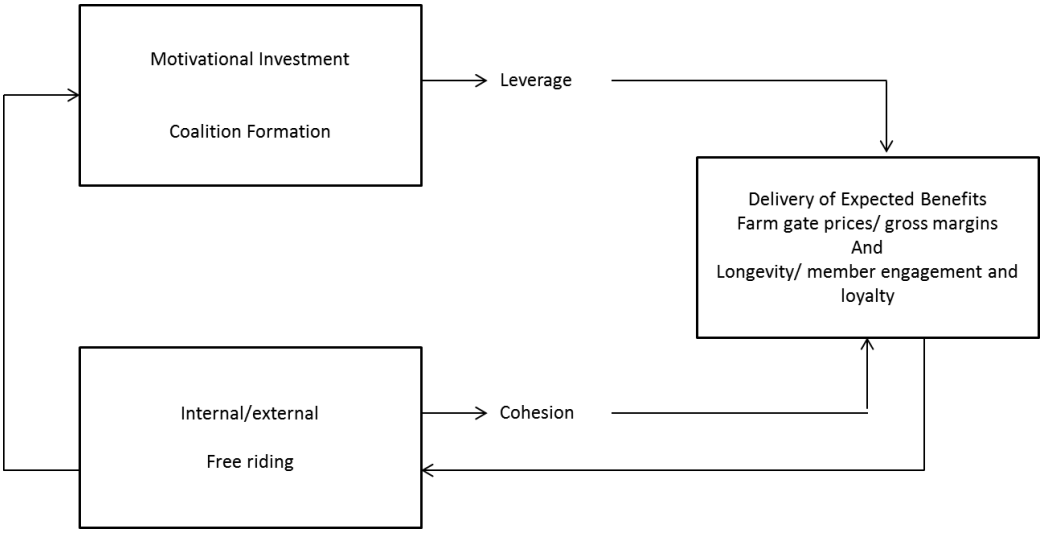


Figure 4.1 the potential outcomes: the leverage/free rider matrix

The causal relationships between these leverage and cohesion factors can be represented in the terms illustrated by figure 4.2, as adapted from figure 1.1. This diagram will form the basis upon which the exploratory framework will be built. The next sections will examine the detail of this framework with greater rigour.

Figure 4.2 the basic interelationships in the exploratory framework



4.2 Understanding the delivery of leverage through motivational investment / status giving and coalition formation.

As stated in Chapter 2, the literature on Power and Dependency suggests that the cooperative can achieve financial benefits for members if it ensures the dependency of downstream parties by increasing the motivational investment of buyers and or reducing the available alternative sources of supply. Power dependency literature provides insights into the distribution of margins between farmers and their buyers, and suggests that the cooperative offers the opportunity to amass individual resources in order to create higher returns for the collective whole.

Work undertaken into determinants of power relations in vertical relationships suggests farm gate price is contingent upon the potential ability of both buyers and sellers to mobilise

power attributes. In turn, the distribution of power attributes depends on the relative scarcity and utility of exchange factors. This means that in order to deliver greater benefits than alternative market channels, the marketing cooperative in a buyer/seller relation needs to be less dependent than their buyers via the attainment and utilisation of power attributes. Power attributes or resource sets have been seen to be derived from properties both intrinsic to cooperatives and to the industrial environment in which they are located.

4.2.1 Coalitions formation and creation of scarcity- Supplier power

The *Power Dependency Theory* predicts that the balancing operation can be found in coalition formation, thereby reducing the ability of the dominant party to seek gratification elsewhere and creating a climate for the delivery of *fundamental transformation*, a reversal of the power balance between the farming sector and their customers (Hendrikse, 2004). The establishment of a cooperative represents a consolidation of the number of sources of supply for buyers, thereby enabling the reduction of competition, contestation and substitutability within the market. As held by Porter, businesses can improve leverage though building barriers to entry. These can include increasing the costs of entry for potential rivals through creating new markets, establishing economies of scale or developing inimitable products. Alternatively they could encourage action by buyers which would inhibit the exit of buyers from the market through such actions as specific investment within the particular products.

By investing in economies of scale or inimitable products, the cooperative reduces alternatives and increases switching costs and, potentially, search costs for buyers. Cooperatives may also be able to improve their position further by placing obstacles either to

new entrants or to buyers switching to alternative suppliers as a result of problems of access to distribution that emerge where a few parties operate control over the distribution channels, which inhibits market entrants.

Much of these strategies require specific investments by the cooperative in order to maintain their competitive position. The development of inimitable products similarly will require technical, human, physical, dedicated, brand investment in order to ensure delivery. As previously discussed, *traditional* cooperatives are restricted to membership as the main source of funds and this has proved often problematic.

Figure 4.3 illustrates the ideas of Emerson in greater detail. For instance, it indicates that inimitable products can be attained through causal ambiguity, reputational effects or technical specificity. These factors have been described as power attributes or resource sets and are derived from properties both intrinsic to the cooperative and to the industrial environment in which the business is located.

4.2.2 Coalitions formation and creation of scarcity- Buyer power

As suggested in Chapter 2, even where the cooperative increases scarcity their buyers may retain a dominant position. In highly concentrated markets, where there are few buyers, few product differences, barriers to new entrants, effective economies of scale, largely standardised products and high switching costs for suppliers, the balance of power may rest more in the hands of the buyer, even after supply market consolidation from coalition formation. Buyer power declines in direct correspondence to levels of concentration and

contestation within the buyer's side. It is in such circumstances that coalition formation in supply outlets will have the best chance of shifting the balance of power. The risk with coalition formation is that when the buyer side is concentrated, there is little to intimidate buyers when there are a number of alternative suppliers. In the light of the problem of respective balancing mechanisms Figure 4.3 also includes buyer-side considerations.

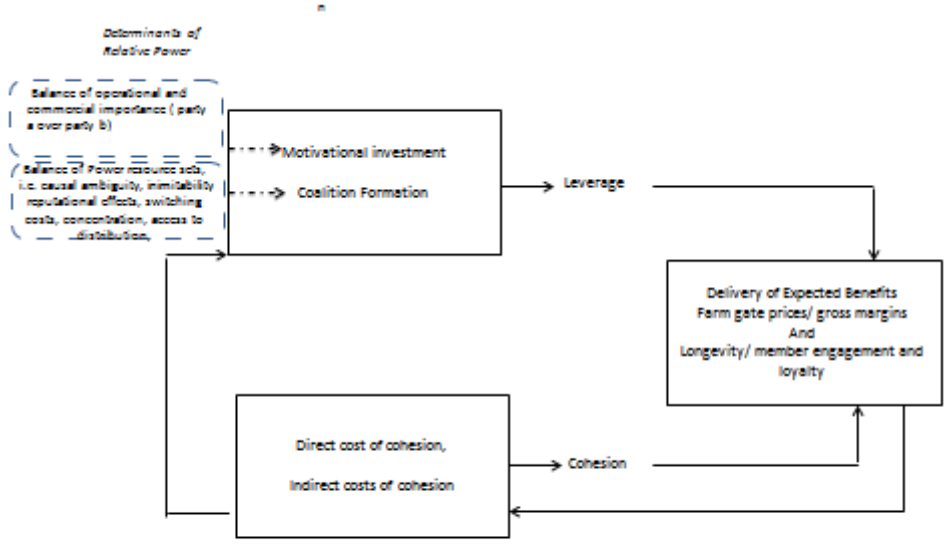
4.2.3 Increasing motivational investment, status giving – buyer and supplier dependency

Emerson also proposes that organisations are able to increase leverage, improving the status giving or motivational investment of their product or service. This means that they are able to supply a product upon which the buyer places greater value than alternatives within the market. That is, the product offers the buyer greater utility or functionality. In business to business relationships, it is contended that utility is a function of the extent to which it can be substituted[43] by other products and is critical to the firm's revenue making activities (Cox et al., 2002). Products are more important to buyers where they contribute to the presentation of core competences by the buyer, they represent a significant proportion of their overall spend and are key to the delivery of the final product and image (Olsen et al., 1997). In the context of the discussions in chapter 2, the power attributes of the supplier are know-how advantages, specialised investments and impact of the transaction on image. These can be attributed to inimitability and causal ambiguity. Attention has been also drawn to the distinction between attributes which affect operational importance, those attributes that relate to core competences of the supplier, and those which enhance the commercial importance of

[43] Substitution in this context refers to economic substitution where two goods are held by the buyer to be of equal use and where an increase in price of one product will result in a shift in the demand for the other good.

a product to the buyer, which are measured in terms of impact of image and overall revenue. This distinction is more clearly inherent in the work of Cox et al. (2002).

Figures 4.3: Outline of exploratory framework as expanded from figure 4.2, illustrating drivers of balance of power



4.3 Cooperative longevity and cohesion

As discussed in the previous chapters, the distinctive governance properties of traditional cooperatives mean that in the interest of completeness, any exploratory framework must consider the impact of the free-rider problem on cooperative success. This is to say that the precept that an individual is self-interested and in pursuit of individual gain is at the heart of the problem. *The Power Dependency Theory* offers the understanding that collective action can redress power imbalances, but in parallel literature it is suggested that this is only possible where sanctions and incentives ensure conformance to the common good. Where

this is not achieved, the problem of non-excludability from the common good, whereby an individual may benefit without bearing the costs of cohesion, can undermine the delivery of financial benefits to members and thus the longevity of the cooperative.

4.3.1 Direct costs - Asset specific investments

As suggested earlier in sections 4.2.2 and 4.2.3, the delivery of leverage for the cooperative is contingent upon the availability of funds, and asset specific investment can be classified as dedicated investment, brand investment, human investment, physical investment, site investment as well as, potentially, temporal investment. Cooperatives supplying into highly competitive markets have little option but to make significant specific investment in production capacity, new technology, human resources, new sites, and new products in order to improve their leverage position through either motivational investment or scarcity. Such investments may also be required by the customer to be utilised for their benefit only. Even in the case of new products and brands these could be customer/retailer specific, particularly since the growth in retailer own brands.

The implication of this is that members face increasing demands by their cooperative for funds. As the *traditional* cooperative is heavily constrained as to sources of funds under the Rochdale rules, this has meant that the member investment extends beyond the historical contribution through the cost of membership, and includes marketing costs and any on-farm investment required to improve farm efficiency. Higher demands for finance can result in member disaffection.

There are three reasons as to why investments made by the cooperative can be seen to be a cost to a member. Firstly, because of the *Horizon* issue farmers believe that they will retire from farming before the investment yields benefits. Secondly, there is the *Portfolio* problem, in which the investment is in a product not produced by the farmer. Finally, the farmer may need to make considerable on farm investment in order to benefit from the investment in cooperative activities. The problem of asset specificity increases in line with the number of products produced by cooperatives and therefore is exacerbated as the activities of the cooperative become more and more diverse (Cook, 1995; Nilsson, 1999; Van Bekkum, 2001).

4.3.2 Indirect costs - costs of free riding

Additional costs, or perhaps more accurately losses to benefits, emerge as a direct consequence of non-excludability, individual calculative opportunistic behaviour and the free rider problem. The concept of non-excludability explains that it is not possible to exclude individuals, whether a member or not, from gaining from the benefits generated from cooperative action. In cooperatives where it is not possible to exclude individuals from benefiting from cooperative action, there is a potential for an overal loss in total gain as a consequence of the failure of individuals to bear the cost of cohesion.

In the case of members, noted as internal free riders, as depicted earlier, there are three forms of free riding behaviour, which are: over production, non alignment of on farm activities and non investment in off farm developments. A further type of free riding can be perceived

to stem from the non-excludability of benefits to non members, that is, external free riding, which has at times been seen to be a positive outcome of cooperative action as well as a threat to cooperative survival (Staatz, 1987). On the negative side, the logic of collective action would suggest that members would experience a level of dissonance in bearing the costs when external parties gain the benefit of increased farmgate prices without bearing the costs. If all were to do so then the cooperative would not be formed or would fail, where members became disloyal and/or defected. The relationship between indirect costs and cohesion is illustrated in figure 4. 4. These are two fold. In the first instance these are incurred as a direct consequence of the free rider problem.

4.3.3 Indirect costs- Monitoring, sanction, lobbying, negotiation, search, control and shirking costs

As illustrated in figure 4.4 and chapter 3, the free rider problem means that there are costs inherent to collective action. These are direct costs of ensuring conformance, as in monitoring , lobbying, negotiation, search, control and sanction costs, and the indirect costs, which are a consequence of not achieving cohesion, as in allocative costs or costs of inefficiency.

4.3.3.1 Monitoring, lobbying, negotiation, search and control costs

Monitoring, lobbying, search negotiation and control costs are those costs associated with measures of member coherence and have been discussed at length in Chapter 3 in the context of transaction cost economics and the principal agency issue.

Transaction costs, known alternatively as influence costs, are incurred in the undertaking of any activity and in cooperatives rise in proportion to the disparity of members' interests (Turner, 1990; Cook, 1994; Cook, 1995; Hariyoga, 2004). These costs are incurred as a consequence of information searches and the need to meter and lobby members (Hechter, 1984).

In addition, there are the costs of monitoring and controlling managers, known as agency costs. Principal Agency theory suggests there are two potential sources of conflict in the principal agency relationship and these stem from a potential non alignment of managers' and members' objectives and levels of risk aversion (Porter, et al., 1987; Sexton and Iskow, 1988; Klein et al., 1997; Richards et al., 1998; Hakelius, 1999; Iliopoulos and Cook, 1999; Gripsrud et al., 2000). This is an issue of particular significance where cooperatives have no external monitoring systems, such as external stakeholders. The framework suggests that where managers are without external control mechanisms, x and allocative inefficiencies will follow. This imposes monitoring costs on the members.

The position is exaccerbated where managers lack the competence to achieve competive advantage through building and reconfiguring internal competences" (Teece et al., 1997, p. 516; Eisenhardt and Martin, 2000). Cooperatives have traditionally been a less attractive employment opportunity than alternatives, in that they have been perceived by the business community to be of a lower status with unfavourable remuneration packages. This reputation has had a significant impact on the levels of skills of the managers employed. Farmer directors, who operate as mechanisms of control, may have little experience in order to

monitor the nature of the decisions made. In effect this represents an additional principal/agency problem.

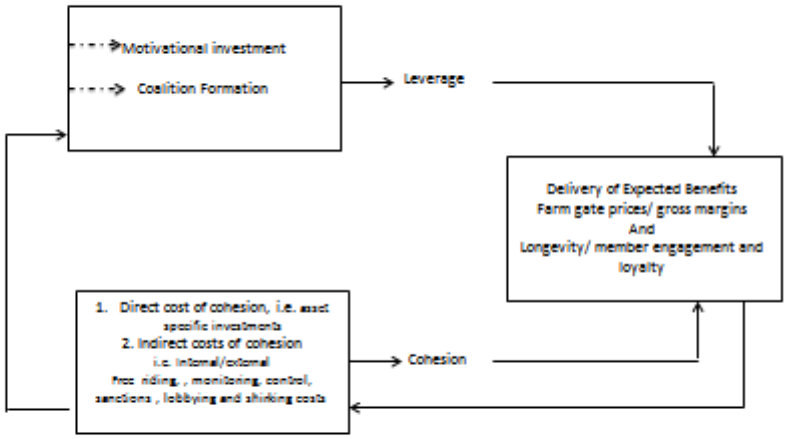
The concept of an agency relationship may be expressed as the contract under which the cooperative members engage the manager to perform the service on their behalf. Where there is a lack of external control, high administrative costs may be incurred due to lack of management competence or actions taken by the manager, which are in their own interest rather than those of the cooperative members. Such costs could range from high sales costs, or the opportunity costs of poor decisions at a corporate, business or functional level that may result in lower returns than alternative types of governance (Katz, 1997; Katz and Boland, 1999; Hariyoga, 2004).

Furthermore, the dilution of ownership (Jenson and Meckling, 1976) means that costs accrue not simply through the monitoring and control of the actions of managers but also in the costs of employing more qualified managers. Where managers are deficient in management skills and experience of both operational and strategic decision making, there are potential opportunity costs of ineffectual decisions (Sexton et al., 1988; Howard and Klosler, 1991; Katz et al., 1997; Kyriakapoulos et al., 1999; Bruynis et al., 2001). On the other hand, if competent managers are attracted through attractive pay deals and compensation payments, they risk being seen by members as opportunistic, particularly as the salaries they receive far exceed those received by the members they serve. Even where competent managers are employed, the extent of their control over member activities and their ability to reconfigure internal competences may seriously inhibit their ability to attain motivational investment.

4.3.3.2 Sanction costs

Sanctions costs are those costs incurred in putting in place incentives to ensure that individuals conform. Along with monitoring costs these were discussed in chapter 3 under transaction cost and agency costs. These stem from the deployment of resources to ensure compliance that would not be deployed in alterative goverance structures. These can be the costs of administering additional payments for conformance to retailer specifications, technical training for farmers or costs of disposal. Alternatively they can be the costs of failing to ensure compliance and the ensuing loss in efficiency. They can also include such costs associated with incentive programmes and compensation packages to align principal and agent interests (Richards et al., 1998; Hariyoga, 2004).

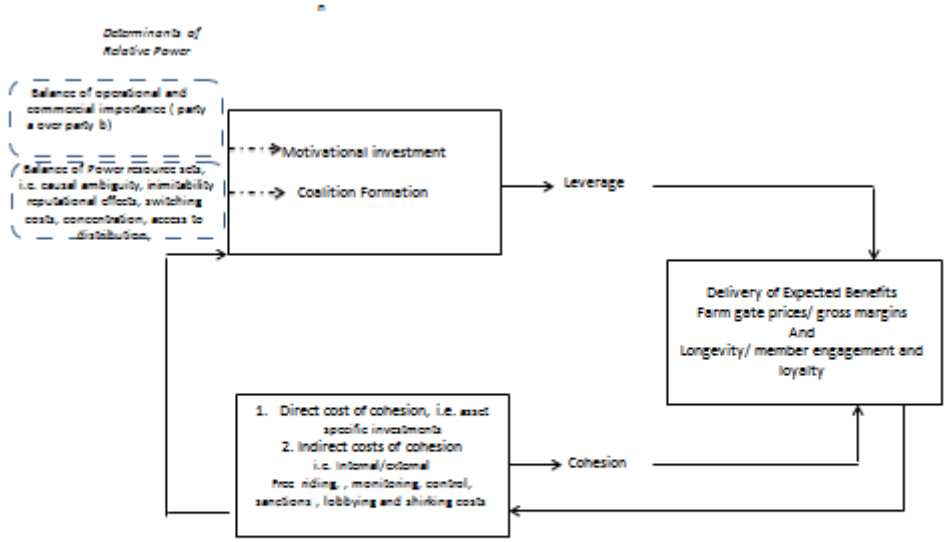
Figure 4.4 Outline of exploratory framework as expanded from figure 4.2illustrating the detail of costs of cohesion and the freerider problem



4.4. Conclusion - The exploratory framework –

This leads to the following position, suggested by *Power Dependency Theory* and Olson's work on the "logic of the commons". The success of cooperatives depends upon both the ability of the cooperative to redress power imbalances between members and buyers, either through increasing power coalition formation, or decreasing the buyers' power through motivational investment, whilst at the same time protecting the cooperative against the risks and costs of external and internal opportunism. Figure 4.5 makes a provisional attempt to show the relationships between the interlinking causal relations. It shows both the relationship between coalition leverage and factors affecting the delivery of higher returns which are a function of the loss of cohesion and the costs of cohesion.

Figures 4.5: Outline of exploratory framework as expanded from figure 4.2.,4.3 and 4.4



This suggests the following research focus as defined in two iterative, interconnected aims. The argument is that in the context of *traditional* cooperatives, the dominant format in the UK at the start of this research, in order to consider the ability of the cooperative to generate leverage, only a partial understanding would be arrived at if the research failed to consider the cohesion problem.

This research aims use this exploratory framework to gain a deeper understanding of the determinants of cooperative success. This is done by applying the framework to three case studies. These concern Apples, Pigs and Dairy cooperatives; however, before proceeding to the case studies, in the next chapter the author defines her methodology.

CHAPTER 5- METHODOLOGY

5.0 Introduction

The aim of this research is to examine and understand the factors that lead to the success of agricultural marketing cooperatives in the UK. With the aid of an *A priori* model, the author has designed a research methodology with the intent to develop a theoretical framework.

As informed by literature, the *A priori* exploratory framework suggests that in order to be successful the cooperative has to both be enduring and deliver improved farmgate prices and margins. The exploratory model suggests that this is an iterative problem that stems from the interrelation between leverage and cooperative cohesion. The purpose of the thesis is to assess the extent to which the model aids our understanding of the factors affecting cooperative success. This thesis is conducted through a case study methodology. Three cooperatives that might best be described as *Traditional* agricultural marketing cooperatives were selected for this research. This is because they represented the dominant format of cooperative at the time of the research.

The research design needs to consider four interconnected issues: the research question, the research philosophy, the methodology and the research method (Lincoln and Guba, 2000; Creswell, 2009). The first part of this chapter will clarify the research question and the aims and objectives of this research as embedded within the exploratory framework. The chapter then goes on to define the research philosophy, its methodology and the research process as

well as the how the research has been designed to ensure reliability and validity of research findings.

5. 1 Summary of Research Question

In chapter 4, the exploratory framework suggests, based on *Power Dependency Theory* and principles held in Olson's work on the *"logic of the commons,* that the success of co-operatives is dependent upon their ability to rebalance the power relations between the farmers and their buyers through coalition formation, or status giving actions, whilst at the same time ensuring cooperative cohesion.

The research question is, therefore:

What are the factors that determine the success of cooperatives?

Aim:

|In the context of the research question, the aim of this research is to develop a theoretical framework to explain the determinants of cooperative success.

Objectives:

1. To derive an exploratory model from key literature of cooperative action, for the purpose of examining the causal factors for cooperative success.
2. To examine the nature of the factors that affect cooperative success in the context of three case studies.

3. On the basis of the deeper understanding, to develop a theoretical model of success and failure that could be tested in a wider context.

5.2 Research design

This following section explains and examines the nature of the research design. In the first section, the potential philosophical positions or worldviews are explained. The section deals with the ontological and epistemological differences of a range of research philosophical positions from positivism to social constructivism. The nature of research philosophies or worldviews varies according to the following parameters:

1. their conceptions of what is real, the ontology,
2. the relationship between the researcher and the known; the epistemology. (Healy and Perry, 2000; Kidd, 2002; Lincoln et al., 2000; Creswell, 2009).

The determination of the research philosophy or worldview enables the researcher to set the question and then devise a methodology that delivers verifiable and valid understandings of a phenomenon (Blaikie, 2000). The nature of what is seen to be real and how we recognise reality determines the validity of the process by which knowledge is discovered (Kidd, 2002; Creswell, 2009). This next section explains the distinctions between research philosophies and argues that the current underpinning ontological and epistemological position of the research tends more towards the realist stance, a paradigm increasingly evident in economic, organisational research (Casson, 1996; Easton, 2008).

5.2.1 Research philosophical worldview and design

How we conduct research and how we know whether research findings are a true representation of reality depends on the ontological and epistemological position of the researcher and the research question. In the first instance, the ontology of a research project is determined by the recognition by the researcher of what constitutes "truth" or reality. As is evident from figure 5.1, there are a number of ontological positions taken, these range from the monist position of objective truth to the belief that truth is pluralist and conceptualisation of the observer.

In addition, differences between research philosophies can stem from how we know reality or truth to be true. Again at two extremes, truth may be objectively observable in certain paradigms or may be more intuitive and subjective in others. The epistemological stance defines the parameters of what we know to be true. Considerable effort has been made to clarify the issue for research students. Crotty has represented the problem of research philosophies, looking primarily at worldview as a continuum (Crotty, 1998). Alternatively this has been represented as a quadratic that allows for more precise differentiation between the objective and subjective qualities of ontology and epistemology, as illustrated in figure 5.1(Johnson et al., 2000).

Figure 5.1- ontological positions adapted from Johnson et al., 2000, p180.

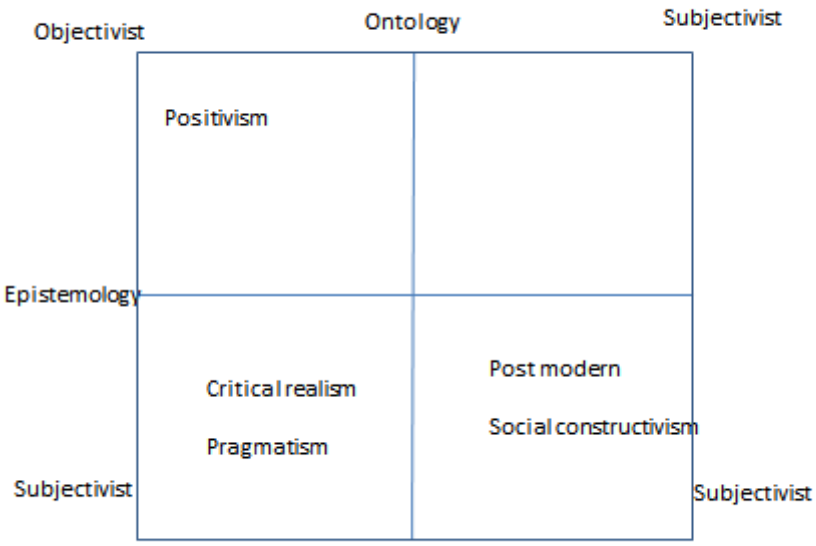


Figure 5.1 distinguishes between positivists, for whom truth and access to knowledge or reality are independent from the observer, and post modernists and social constructivists, for whom there are any number of realities, and these are known subjectively by the observer. Critical realism and pragmatism are shown to sit in the bottom left hand quartile, representing a belief that there is an objective reality but this is subjectively known.

For positivists, truth and our access to knowledge are or can be apprehensible, observable and generalisable. The researcher needs to be an objective, unbiased observer and research needs to be designed to ensure that there is sufficient certainty that the presumed effect or dependent variable can be observed to be a consequence of the independent variable. That is

to say that those changes in the dependent variable can be attributed to variation in an independent variable.

Previously, positivism has been the dominant approach to research design in organisational, management and economic research, (Johnson et al., 2000; Easton, 2008).However, it is apparent that the embeddedness of positivist approaches is beginning to wane, with greater prominence of more subjectivist paradigms such as realism and social constructivism (Knox and White, 1991; Boyce, 1996; Reed, 1997; Johnson et al., 2000; Fairclough, 2005; Morgan and Smircich, 1980).

In contrast to positivists, social constructivists believe that knowledge or, more accurately, reality is a function of individual interpretation, and indeed there is no external reality (Marsh et al., 1998). This means that social structures are made up of shared knowledge, material resources and practices and thus the major task for the researcher is to uncover the nature of the internal reality of the social group/society. Valid findings should be credible and able to be confirmed by those investigated.

Alternatively, there are pragmatists and realists who sit between the two extremes and hold a similar ontological position to positivists, in that they suggest that there is an external reality that exists independently from our cognitive processes (Morgan and Smircich, 1980; Marsh, et al., 1998; Johnson et al., 2000; Sayer, 1992; Johnson, et al., 2000; Easton, 2008).

Realists and pragmatists are both distinct from positivism and each other but both hold that how truth is known is more subjective. The pragmatist embraces the idea that how one

recognises and finds reality depends on how the research question may be best answered (Blaikie, 1993). That is to say, if one way of thinking about a problem is able to explain or predict a specific event or phenomenon then it is an appropriate. Pragmatists believe in the power of thought and that true interpretations of reality are those that can be assimilated, verified and validated, i.e. are made true by the course of events (Johnson et al., 2000)

In contrast, the realism paradigm, particularly critical realism, suggests that truth exists independently from our knowledge of it, but that people's perception is theory laden. That is to say that the observer places their own constructs on reality. The critical realist espouses a rational action view of human behaviour, but relies less on the explanatory force of constant conjunction of empirical evidence and more on the position that events may be experienced differently amongst the social world (Bhasker, 1979; Putman, 1994; Casson, 1996; Lawson, 1997; Moura and Martins, 2008). This means that our explanations of it are socially constructed and are contingent upon our ability to conceptualise and communicate our understanding (Trigg, 1980; Margolis, 1986; Putnam, 1981; Putnam, 1994b: p.476; Bhasker, 1978).

This has been articulated in terms of the distinction between *intransitive* objective truth that exists independently from our knowledge and the *transitive,* a reality experienced. It has been said to be through the exploration of the various *transitive* truths that the *intransitive* is determined (Johnson et al., 2000) Alternatively, this has been conceptualised and communicated in terms of the presence of three domains (Bhasker, 1975; Outhwaite, 1987) , a *real* domain that contains a generative mechanism (underlying cause), *actual* domain that

may be observed, but exists independent from the observer, and an *empirical* domain that represents the actual events experienced by the observer. This means that there is an external reality, of which certain elements may be accessible from the accounts of the observers, while others may only be uncovered through speculation over observed tendencies.

This explains the presence of competing theories that provide alternative or parallel understandings of the phenomenon observed, an issue that is arguable at the core of this research problem, in which explanations of cooperative success have ranged from coalition formation and improved leverage (Emerson, 1962) to the free rider problem (Olson, 1965). The determination of their common referent, the *real* domain, is said to depend upon a process of *retroduction*, which allows for more rigorous examination of alternative understandings of *actual* domains (Bhasker, 1982, p.35; Johnson et al., 2000). *Retroduction* is based on the assumption held by critical realists that the phenomena observed by human agents are not theory neutral and is therefore it is necessary to examine rival explanations. *Retroduction* has been defined as a model of inference in which "events are recognised and explained by postulating and identifying mechanisms that are capable of producing them", a process known as the logic of inference (Sayer, 1996, p. 107; Downward et al., 2007). In this research, it is believed that there is a monist underlying truth as to the causes of cooperative success, but that current explanations have failed to isolate the *reality* of such causes.

In the next section, the author examines how the rigorous exploration and examination of the multiple ways in which the event is explained can reveal a closer understanding of the causal relationships. A *retroductive* approach enabled through the triangulation of data, method and

theory has allowed the author, with the aid of the exploratory framework, to dig below the socially construction preconceptions to the real *intransitive* truth (Johnson et al., 2000; Downward et al., 2007).

5.2.2 Methodology or logic of inquiry

The methodology used in this research is a case study approach. Methodology can be defined as a combination of methods and techniques, and the practices involved in implementing and in interpreting data (Easterby-Smith et al., 2002 p31; Olsen et al., 2005). The methodology is distinct from methods, which are simply the techniques of data collection and analysis (Easterby-Smith et al., 2002, p.31).

In the development of a methodology there are a number of key decisions to be made. Firstly a researcher must identify the nature of the methodology to be deployed, qualitative, quantitative or mixed methods. These have been sub classified as seen in figure 5.2 (Creswell, 2009, p.12[44]), which depicts the range of methodologies available. In the second instance, if, as in this research, case studies are seen to be the most appropriate research methodology, then there are further decisions to be made, such as the number of case studies and their unit of analysis.

[44] Creswell describes these as strategies of inquiry.

The terms quantitative and qualitative relate as much to the methods of processing the data as to the extent to which data is numerical or verbal. In certain disciplines there has been a predominance of one method over another. However, an increasing number of researchers in business and organisational behaviour have deployed ethnography, case studies, survey, experiments and action research to conduct research, a phenomenon that is partially a consequence of the increased diversity of philosophical perspectives of the research undertaken in these disciplines (Buckley et al., 1996; Casson, 1996; Cassel et al., 2004; Zuber-Skerritt, 2004; Fleetwood, 2005; Moura et al., 2008; Easton, 2010). For instance, positivist research, perceived to lend itself more to quantitative methodologies such as surveys and experiential research, which normally rely on the statistical analysis of non-parametric or parametric data as tools to determine observable cause and effect, is often seen to underpin explanatory generalisable research (Guba and Lincoln, 1994). In contrast, methodologies such as ethnography and grounded theory studies have a tendency to adopt a social constructivist perspective.

Quantitative	**Qualitative**	**Mixed Methods**
Experimental studies Non-experimental designs e.g. surveys	Narrative research Phenomenology Ethnography Grounded theory studies Case study	Sequential – expand the findings of one method with another Concurrent –merges quantitative and qualitative data (Case studies) Transformative – action research

Figure 5.2 Alternative methodologies adapted from Creswell, 2009, p.12.

Case studies, on the other hand, have been used to examine research question from the whole range of philosophical traditions, from positivist to interpretivist or social constructivism

(Drake et al., 1998), and there are various arguments that suggest that case studies and case study design differ according to the philosophical stance. One argument is that case studies that are taken from a social constructivist or interpretivist position tend to be more explanatory or theory testing than positivist research (Scapen et al., 2002). Alternatively, others hold that theory testing or explanatory case research is generally positive in nature (Layder, 1993; Eisenhart, 1989). Meanwhile, in research conducted for the purpose of theory development, where a richer insight into complex reality is perceived to be required, a more subjective epistemological position is often adopted (Guba et al., 1994).

Yet, the issue is frequently articulated in terms of the nature of the question (Yin, 1994; Rowley, 2002; Yin, 2009). It is argued that case studies are of particular value in the examination of two types of questions. Yin argues that questions best fitted to case studies are what questions in exploratory research or ***how and why*** questions in explanatory work (Yin, 1994). In the context of this exploratory study, case studies offer the further advantage of multi-perspectival analyses and holistic in depth investigation of a phenomenon that requires more rigorous research (Feagin et al., 1991; Yin, 1994, p. 23). Case studies are particularly well suited to exploratory research where existing theory offers inadequate explanation of "causal powers" and thus are of particular value in light of the research objectives of this thesis (Eisenhardt, 1989, pp. 548-549; Lutz et al., 1989; Yin, 1981; Adams and White, 1994, p.573). They enable the researcher to bring out the details from the view point of the participants by using multiple sources of data (Yin, 1994; Stake, 1995). In other words, this methodology allows for the examination and collation of multiple data sources, which enable the researcher to "trace out links over time", and thus more in-depth

examination of the relationship between the *real* and the *actual* domains (Easton, 2001; P.211; Dul et al., 2008).

5.2.3The validity of case study design- The choice and number of case studies

The issue of validity and how we can ensure that research is a verifiable representation of reality is central to the delivery of a research project. As with other methodologies there has been considerable debate in case study research with regards to this problem (Eisenhart, 1989; Yin, 1994; Merriam, 1998: Gerring, 2007). Factors to consider in the development of a valid case study research methodology include: the number of case studies, the unit of analysis, the logic linking data to propositions through the triangulation of data sources, methods of data collection and theoretical constructs.

Case study design must take into consideration both the sources of the data and their validity. Case study research is known as a triangulated research strategy, and requires multiple sources of evidence to ensure construct validity (Yin, 1994). Yin, (1984) identified four types of triangulation: *Data source triangulation*, when the researcher looks for the data to remain the same in different contexts; *Investigator triangulation*, when several investigators examine the same phenomenon; *Theory triangulation*, when investigators with different viewpoints interpret the same results; and *Methodological triangulation*, when one approach is followed by another, to increase confidence in the interpretation. Triangulation using different methods normally assumes both quantitative and qualitative, but can also

represent different qualitative data. These two types are distinguished in terms of either the within or the between method of triangulation (Denzin, 1970; Webb et al., 1996).

Alternatively, it is argued that one should triangulate on pragmatic grounds in order to determine the degree to which the *actual* domain degree represents the *real*. Logic of inference or *retroduction* suggests that triangulation is important in order to gain an understanding of the transitive dimension of knowledge, and can also extend into the coding of data, which can include content, discourse, and grounded analysis (Downward et al., 2007).

In this study, data have been triangulated both from the perspective of a variety of sources, but also from a method or methodological perspective. This means that the research has drawn from semi structured interviews, published financial data, unpublished company accounts, government information and company reports and archived historical reports and publications. These will be discussed in more depth in section 5.3. It can also be argued that the exploratory framework as seen in chapter 4 is also a means of triangulating potentially competing theories, with the objective of arriving at the inherent causes (see objective 3).

A further issue with regards to validity relates to the number of case studies selected. As illustrated in figure 5.3, case study methodologies can be made up of a single case study or multiples. The rationale for the use of single case studies has been that they may be of value to confirm or challenge a theory or present a unique or extreme case (Yin, 1994). Single-case studies are arguably also ideal for revelatory cases where an observer may have access to a phenomenon that was previously inaccessible and may be of value where a longitudinal

study is undertaken. It is argued that whatever the rationale, they are particularly vulnerable to claims to bias and indeterminacy (Yin, 2009). Alternatively, it is argued that valid research can only be yielded through at least 4-10 cases, although the thread of the argument leads one to conclude that the discussion in the context of theory testing is taken from a positivist stance. The rationale behind this is that fewer case studies allow little scope for generalisability in that they lack rigour (Eisenhart, 1989). However, others have suggested that theory development and indeed theory testing research strategies can be achieved through 4 or less and even one case study (Yin, 1994). This position is more pragmatic in that it describes how researchers should be guided by their sense of the complexity of the context of the research and the implications for external validity (Yin, 2009).

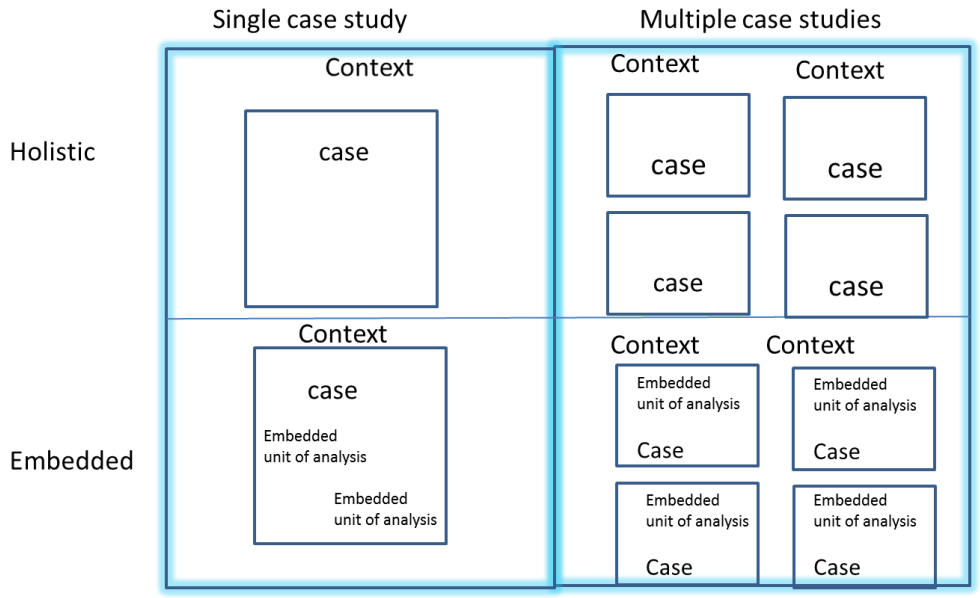


Figure 5.3 Adapted from Yin 2009 – types of case studies

This research has chosen to undertake three case studies, with the view that multiple case studies are often considered more compelling and more robust (Herriot and Firestone, 1983; Yin, 2009). There are several other rationales as to the choice of the case studies. The three case studies selected were seen to complement each other by replicating the findings under different conditions, through replication logic, and, in part, address different aspects of the overall theory, as well as offer the opportunity to examine rival explanations (Johnston et al., 1999).

A further issue facing the researcher with regards to validity relates to the units of analysis and their number. As illustrated in figure 5.3, there may be one or more units of analysis within any case study, i.e. a holistic approach or a number as in embedded design (Yin, 1994). As apparent in figure 5.3, holistic designs focus on a single unit of analysis. Holistic designs offer certain advantages, particularly when there are no apparent logical subunits or where there is a holistic theory which underlies the case study. As the unit of analysis of this case study is both at the level of the cooperative as a whole and the farmers that are members, it can be seen that the three cases studies are of an embedded design. This is because the focus of the study is on the ability of the cooperative to generate benefits for members' over time and the maintenance of member cohesion.

5.2.3.1. The choice of case studies in this study

In selection of the case studies for this research, it was recognised that each case study is a whole study, not simply a sampling unit (Johnston et al., 1999; Yin, 1994). This means that cases were not randomly sampled from the population, but selected on the basis of those best

suited to investigate the theoretical constructs derived from Emerson and Olson's work, replicate the findings under different conditions, address different aspects of the overall theory, as well as offer the opportunity to examine rival explanations (Glaser and Straus, 1967; Johnston et al., 1999).

While all cooperatives chosen were nearer in nature to traditional cooperatives, each of the three identified had relaxed an element of the Rochdale principles.
The three case studies identified are as follows:

1. Case 1 has been selected because of the belief that its limited size, and the relative scarcity of one of the products sold – the Bramley apple would suggest that there would be evidence of both internal cohesion and scarcity. The case study examines the top fruit sector in general and makes specific reference to the Bramley apple, which because of the uniqueness to the UK and the dominance of the cooperative as a Bramley apple supplier has few competitors. The Society of Growers of Topfruit (SGT) is one of the key suppliers of Bramley apples within the UK. It operated under closed membership rules, and was supplied with external funding from Brussels.
2. Case 2- First Milk, by contrast was at the beginning of this research one of three major cooperatives for a product that in its high value liquid form faced limited threats from overseas suppliers. This cooperative was thus selected as it potentially represented a case of potential scarcity. Furthermore, in an apparent attempt to secure leverage through the development of regional cheeses, the cooperative was seen to be of interest in the consideration of the extent to which added valuing could generate

motivational investment. However, the size of the cooperative and the diversity of on farm dairy production systems suggested that it would be open to problems of internal cohesion, and external free riders. In addition, external funds were supplied through the Welsh Assembly.

3. Similarly, Case 3 was selected on the basis that it would be able to achieve either motivational investment or increase scarcity, plus as a small cooperative that demonstrated characteristics of internal integrity. Yorkshire Farmers Marketing Ltd is well established and it is one of 5 key cooperatives supplying pork to abattoirs and processors in the UK but is faced with horizontal competition from Danish and Belgium companies who hold a high proportion of the sales to the multiple retailers. However, this cooperative has recently developed added value products which it is labelling as local. External funds were made available for development from the EFFP and the Regional Development Agency.

5.2.4 Data collection and analysis - implications of data sources for validity

The approach to quality, validity and reliability of data is highly dependent upon the ontological and epistemological position of the research (Kirk and Miller, 1986; Warren, 1991; Warren and Cragg, 1991). In a positivist context, validity is generally held to be the extent to which changes in the dependent variable can be attributed to variation in an independent variable, (Lincoln and Guba, 1985, p. 290; De Ruyter et al., 1998). “Proof” or “disproof” is a function of determining appropriate observable measures to test the relationships between cause and effect. Such tests need to consider the validity of the

proposed relationship between the phenomena and the effect, *internal validity*, the extent to which the measures effectively measure the theory, *construct validity*, the extent to which the measure effectively tests the theory, *external validity*, the extent to which it is generalisable, and *context validity*, the extent to which the results are reliable (Healy et al., 2000, Lincoln et al., 1985, p. 290) In short, validity tests should be designed to ensure the effectiveness of the measures and the generalisability of findings across contexts.

In contrast to the positivist view, the more subjective classical realism paradigm offers the position that the discovery of the objective truth relies heavily upon the subjective assessment of the researcher. This, in real terms, is a departure both from the positive perspective and the diametrically opposed position of social constructivists, where research quality is associated with subjective belief in findings (credibility), sufficient evidence to support beliefs (confirmability), a consistency in approach to research as well as the usefulness of findings to understand other scenarios (transferability). In essence, researchers perceived that neither framework was a robust test in the realism paradigm, to the extent that Healy proposed six alternative criteria (Healy et al., 2000). These amounted to: ontological appropriateness, a condition which suggested that truth was contingent upon collective interpretation, contingent validity[45], and multiplicity of perceptions of participants thereby requiring the triangulation of multiple informants[46], methodological trustworthiness[47], analytic generalisation[48], and construct validity[49] (Healy et al., 2000). These are illustrated in

[45] i.e. boundaries are fuzzy and cannot be explained by direct cause and effect
[46] conception that there is a window of reality through which a picture can be determined through triangulation with a range of perception
[47] This refers to extent to which the research can be audited by developing a case study data base use of quotations – it is suggested that this can be seen to be similar to the positivist conception of reliability. It is broader but similar to consistency.
[48] theory building – back to the concept that must be predominantly building not testing – not that it shouldn't be tested but has to be built and confirmed or disconfirmed before being considered generalisable

table 5.4 along with the nature of the dimensions of the research design that are designed to ensure these.

Figure 5.4 Summaries of tests of quality of research

quality of tests	**dimensions of research design to ensure research quality**
construct validity	▪ selection of appropriate case studies to theory, ▪ determination of appropriate data sources ▪ sampling techniques e.g. snowballing
multiplicity of perspectiv	▪ determination of appropriate number of interviews to illicit an objective perspective, ▪ triangulation of multiple interviewees
ontological appropriaten	▪ appropriate sources of data- triangulation of multiple sources of data and interviews ▪ sampling techniques e.g. snowball samples plus unit of analysis
Contingent validity	▪ triangulation of data ▪ within method triangulation ▪ theory triangulation
methodological trustworthiness	▪ systematic application examination of the data presented using measures and where appropriate content analysis
analytical generalisations	▪ theory testing as application to construct ▪ determination of measures for variables set out in the theory

Figure 5.4 shows that in order to ensure research rigour, with construct validity, multiplicity of perspectives, ontological appropriateness as well as analytical generalisations the design of the research needs to take into account:

1. appropriate selection of cases with sufficient case studies to make analytical generalisations
2. appropriate section of data sources and sampling methods
3. appropriate selection of measures to ensure construct validity

[49] refers to how well information about the constructs in the theory are being measured in the research

4. triangulation of data with the multiple informants and data sources to ensure multiplicity of perspectives
5. The determination of a unit of analysis that best tests the theoretical constructs for the purpose of evaluation and improvement, to ensure ontological appropriateness.

In effect, it is argued that whilst validity cannot be completely assured, the use of multiple sources of information, plus the systematic use of measurements based on Emerson, Porter and Olson can ensure construct validity, methodological trustworthiness and internal validity leading to an understanding of the ontological appropriateness, as well as potentially support analytical generalisations. For criteria used for systematic measurements see appendix 1.

5.2.5 Method and Sources of Data and validity

As argued earlier, the reliability of the results depends on how the design of the research assures validity, trustworthiness, ontological appropriateness, and multiplicity of perspectives. In order to ensure validity the research method was designed to ensure: the triangulation of data, effective sampling and effective analysis of data. This next section explains the 3 steps involved in the gathering, transcription and coding and analysis of data.

5.2.5.1 Step 1- data collection

In step 1, the data collection took place over a three year period, 2007-2010, and drew on a range of data sources, including published and unpublished secondary data including

financial accounts, existing research, company reports, and government reports, archived data and reports/publications, trade journals and other trade publications, and primary sources such as interviews. Interviews held with farmers, competitors, buyers, buyers' competitors, and cooperative managers and directors provided detailed information from the varied empirical domains. Published and unpublished data and resources provided an additional basis for both retroduction and triangulation. The range of sources allows for both in method and between method triangulation. The specifics of data triangulation can be seen as endnotes located in appendix 1. This provides details of the sources which can be cross referenced with the numerical notation in each of the case studies.

5.2.5.1.1 Interviews

Informants were drawn from all the critical sides of the exchange relationship and included members, farmers outside the cooperative, directors and managers of the cooperative, directors and managers of non-cooperative firms, buyers and government and professional bodies supporting the industry. Informants of non-cooperative firms were selected on the basis of the extent to which they were direct competitors of the cooperative. As far as possible, to ensure a range of perspectives of all parties, a number of sampling designs were employed, including snowball sampling as well as random sampling techniques, with a view to identifying multiple informants and thus ensuring construct validity (Yin, 1994). Following initial interviews, key informants such as government agents and key players within the cooperative were asked for contacts with members, buyers and competitors. From

this a series of interviews ensued, and at each stage the interviewee was asked if they could suggest other parties to interview[50].

In parallel, farmers were randomly selected from data banks such as the yellow pages, quasi government databanks, trade magazines, and attendance lists at agricultural shows. Where farmers were members of the focus cooperative they acted as a mechanism for triangulation with the snowball sample; where they supplied other buyers they served as an access point to alternative supply chains from which further snowballing techniques were employed. Interviews with farmers continued until the full range of farming methods and key buying companies were represented.[51] In each of the case studies the number of interviews was selected in order to ensure a wide cross section of viewpoint and position, which for the Dairy and Fruit sectors amounted to 30 each, details of which can be found in appendix 2. In the pig sector, while there was considerable response and interest from farmers, the number of interviews within this sector was restricted by the consolidation of the sector, and the reluctance of the two key processors to participate in this study. This meant that this case study relied more on published data in order to support the evidence supplied in some 20 in depth interviews with farmers, policy makers, and cooperative and non-cooperative parties. This strategy was not constricted to the Pig sector. Businesses and individuals within those businesses in the other two case studies were highly reluctant to participate in the research

[50] Details of interviewees are to be found in appendix 2

[51] For instance, there are intensive, semi intensive and more traditional methods of growing apples, whilst there are 7-10 farming techniques involved in the dairy industry.

and where this took place information was acquired from other specialists, or sometimes constrained to data published by representative and government bodies.

Interviews were semi structured and based on the key questions that emerged out of the exploratory framework. However, they were structured to allow them to be recorded (Please see appendix 2, and 5). Where interviews were recorded this simply involved the direct transcription of the interviews. Where participants had refused to be recorded, detailed notes were taken during the interview, which, directly following the interview, were transcribed. Financial records were also given by most participants and these triangulated with details from the interviews. This stage was in fact the first stage of immersion in the research findings; in effect, the design of the data collection had certain characteristics in common with a grounded approach without the implicit theoretical constructs that partially informed further investigation. Over time, interviews became more extended, as they were informed not only by the exploratory framework but by themes to emerge from discussions with earlier participants. Interviews typically were 40 minutes to an hour long, with later interviews extending considerably beyond that timeframe.

5.2.5.1.2. Published data

The research draws upon a range of published data which provide key sources of information to evaluate the issues of industry structure, respective market share, supplier competitors and buyer competitors, company turnover, current and future developments within the sectors involved, in terms of potential entrants, changes in national and international legislation, and consumer trends. This information was utilised to both triangulate information from

interviews and in some instances as a prime source of data. In the determination of power positions prior to the emergence of retailers within each of the sectors, the findings from published information, particularly from research undertaken at the period in question, became a key source of information. Listing of resources deployed with evidence of triangulation of information is found within Appendix 5 of the thesis.

5.2.5.2 Step 2 Analysis of Data- familiarisation and coding

Step 2 involved, as recommended by many researchers, initially reading and rereading the transcripts in order to become immersed in the data set; in addition, the author found that it was valuable to listen to the recordings at the same time as reading the scripts (Braun et al., 2006). The author then went on to code the interviews, documents, and other documentary and archival evidence. This data was initially analysed and coded according to the exploratory framework using *content analysis,* the themes for which were derived from the exploratory framework, followed by a more loosely determined thematic analysis. The issue for consideration was that of how coding should be undertaken. Silver (2008) highlighted that colour codes are an effective way of defining "blocks" of text to provide a visual cue of the different ideas/themes represented in the data and are useful to distinguish the different themes embedded in the interview data. However, others (Boyatzis, 1998; Saldana, 2008; 2009) made reference to circling, highlighting, bolding, underlining, or colouring rich or significant participant quotes or passages, with words and short phrases. This research used a combination of methods depending on the form of analysis undertaken, including memos, words and bolding of text.

5.2.5.3 Step 3 Analysis of Data- analysis techniques

In step 3 detailed analyses of the data took place. This involved, in the first instance, coding the data according to content and meaning, as is consistent with Content analysis. However, in the interest of triangulation of data, the research drew upon a combination of analysis methods, including content analysis, a thematic analysis and comparative analysis, descriptions of which and of alternative qualitative data analyses are found in appendix 3,

Content analysis is perhaps one of the most widely used and certainly older techniques and requires the researcher to intensely examine the text and classify it into an efficient number of categories that represent similar meanings (Weber, 1990) *Content analysis* has been defined as a means through which many words of text may be compressed into fewer content categories based on explicit rules of coding (Berelson, 1952; Krippendorff, 1980; Weber, 1990). It has been described as "any technique for making inferences by objectively and systematically identifying specified characteristics of messages" (Holsti, 1969, p.14).

Data were cross tabulated from *content anal*ysis based on the terms identified within each subsection of the theoretical framework. A more in depth analysis was undertaken of the themes of conversation, initially in the context of the exploratory framework and subsequently on the basis of *thematic analysis* that fell outside the framework. This research distinguishes between content analysis and thematic analysis, which acknowledges the ways in which individuals make sense of their experience (Braun et al., 2006). Information was then triangulated with data derived from other data sources, in order to unpick and unravel the *real* domain.

What makes the combined techniques particularly rich and meaningful is that their reliance on coding and categorising of the data allays the common criticism of *content analysis* that it has the potential to lose the richness of the information by turning it into quasi- quantitative data. *Thematic analysis* based on conversation looks at the semantic relationships between words and the meaning placed on the events (Braun et al., 2006*). Thematic analysis* differs from content analysis in that unlike *content analysis* it pays greater attention to the qualitative aspect of data, in that it focuses upon identifiable themes and perceived causes of events. *Thematic analysis*, unlike other qualitative methods such as conversation analysis, is not based on a specialised theory, and the task of the researcher is to identify a number of themes that reflect their textual data. In this research a number of themes emerged but were modified over time.

This meant that whilst *Content analysis* offered a way of identifying both the extent to which the exploratory framework was reflected in the interviews and other documentation, thematic analysis allowed for emergent themes. In effect, this was longitudinal as where there appeared to be emergent themes within a set of interviews or documents within a case study these were then added as points of exploration in the following interviews and collection of documentary evidence[52].

The final analysis tool involved the comparison of data from across cases. The use of comparative analysis enabled the researcher to draw out the intransitive through cross

[52] Appendix 5 shows in depth demonstration of the sources and the triangulation of the data.

tabulation of the three cases. *Comparative analysis,* or *Qualitative Comparative analysis* as it is sometimes called to distinguish it from statistical comparative examinations of data, interprets the data qualitatively whilst also looking for causality between the variables. The initial stage of tabulation looked at the presence or not of the themes identified by the previous two analyses, using predominantly a binary system of yes or no. The main areas included in the comparative analysis are displayed in appendix 4.

5.3. Conclusion

The intention of this chapter was to explain the research approach and explore the rationale for the chosen research method. The philosophical assumptions of this work are that there is a monist truth but that there is a need to dig below subjective conceptualisations of the observers to an intransitive truth. The research has used a case study approach in order to do this and has undertaken rigorous triangulation of data on the basis of sources of data and analysis method. This research methodology is coherent with the assumptions of the research philosophy. Figure 5.5 below summarises the research approach.

Figure 5.5 Summary of research design

Summary of this study's research design	
Research philosophy	Realism Ontological approach, monist concept of truth Epistemological approach, multiple representations of theory laden realities, within which there is an underlying truth
Methodology or logic of inquiry	Multiple case studies that allow for multiple-perspectival analysis Two units of analysis, the cooperative as a firm and individual

	firms as part of a collective.
Data collection	Selection of interviewees from across the supply chain through snowball and random sampling Published and unpublished, company, government and non-government reports. Triangulation of data and methods of analysis within case studies and between case studies
Data analysis	Content analysis, Thematic analysis – within case study analysis

The results of these findings are explored in the following chapters. Chapter 6 offers an introduction to the case studies. Each of the following chapters showcases one of the three case studies examined in the context of this research. The case chapters conclude with the key points identified within the context of each study.

CHAPTER 6 - PREFACE TO THE CASE STUDIES

6.0 Introduction

In earlier chapters it was argued that government policy has emphasised the importance of cooperative action as a means of improving the profitability of agricultural producers. Collective action was seen by the government to provide small farmers with the means to reverse power imbalances through increasing absolute or relative scarcity and/or motivational investment. The government hopes that encouraging cooperative action in the sector will enable the UK farming sector to become more sustainable and successful. This thesis questions the logic behind this policy, and whether cooperatives will offer farmers a countervailing force against horizontal or vertical competition.

In the next chapters, through the vehicle of an initial exploratory study, the author will examine the extent to which UK farming cooperatives are in fact increasing leverage and maintaining cohesion. The author also examines the possible linkages between the two themes. That is, the author explores the intuitive expectation that greater leverage will assist cohesion and cohesion will assist great leverage. In other words, cooperatives can enter a virtuous circle. If, across the sector, agricultural cooperatives are able to achieve both leverage and cohesion then it is likely that the UK government will deliver the desired-for alleviation of the crisis in the sector. If they can't, the efficacy of the government policy will be in doubt.

The research findings suggest that there does indeed appear to be an iterative relationship between leverage and cohesion. Cooperatives are unable to improve leverage when faced with a highly competitive buyers' market. Their ability to generate leverage is further undermined by the offensive strategies of competitors in a highly contested market. Historical evidence that cooperatives have effectively either closed the market through relative or absolute scarcity is not consistent with the findings here. The inability of cooperatives to close the market is often attributed to the lack of cohesiveness within the collective. This research, in contrast to previous research, suggests that cooperatives are unable to effectively increase gross benefits through absolute and relative scarcity and or motivational investment from the buyer. However, it suggests also that the continued survival of cooperatives is contingent upon their ability to manage costs. Where costs exceed benefits cohesiveness is threatened; a function of calculatively rational agents and members are presumed to defect. The problem is that cooperatives are threatened if the individual actor is able to experience the benefits of collective action without bearing the costs and this may result in the breakdown of the cooperative. Those benefiting from the cooperative without bearing the costs may be either members of the cooperative or parties external to cooperative action. The purpose of the next three chapters is to explore the value of the exploratory model, as identified in chapters 2 and 3, in the context of three case studies.

6.1 The basis of selection of the three case studies

As discussed in chapter 5 three case studies were selected to explore the issue of the value of cooperatives and whether cooperative action can generate benefits to farmers. These

cooperatives were representative of cooperative activity in their sector at the time of the research. As discussed in chapter 1 they operated under predominantly traditional cooperatives but in disparate terms were evolving into New Generation cooperative governance structures.

Case 1 is examined in chapter 7 and focuses upon a top fruit cooperative, located in Kent, called the Society of Growers of Topfruit (SGT). The cooperative was established in the late 1960s. A closed cooperative with sources of external funding, it is the smallest of the cooperatives explored as part of this research and is now one of the few remaining top fruit cooperatives in the UK. The second case study examines one the largest UK milk cooperatives, First Milk, which has diversified considerably over the last few years, funded in part through government funds. This cooperative was formed more recently, as an indirect consequence of the dissolution of the Milk Marketing Board in the early 1990s.

The third and final cooperative, Yorkshire Farmers Livestock Marketing Ltd (YFLM), is once again a venture of long standing, established in the 1930s, but in a manner similar to First Milk.

As discussed in section *5.2.3.1* the case studies were selected with a view to address different aspects of the overall theory. The choice of case studies was informed by the theoretical framework derived from Emerson and Olson, and cooperatives. SGT was selected as it was small in size, a factor that should have led to a high level of internal cohesion. Furthermore,

the cooperative specialised in the Bramley apple, which was unique to the UK; a source of potential increase of relative scarcity.

First Milk, like SGT, was selected because of its potential as a mechanism through which to create relative scarcity, being a cooperative that controlled 18% of British milk supply, with little threat from imported substitutes. Furthermore, as a larger cooperative with a more heterogeneous membership, it was supposed that the cooperative would be less stable due to the greater potential for internal shirking and uneven distribution of costs. Even though the story of collective action in the dairy industry extends back to the 1930s, this case study is primarily concerned with the most recent period and in particular the period post 1995, when retailers became the principle source of consumer supply.

Although First Milk was also selected for its potential for the creation of what might be considered relative scarcity, it was thought also to have the potential to increase the motivational investment of buyers through its investment in regionally branded cheeses. The criteria for the selection of YFLM reflected some of the criteria of each of the other two. YFLM, as a small cooperative supplying the mainstream buyers with a standard commodity, might prove to increase relative scarcity whilst also demonstrating characteristics of internal integrity. However, as with First Milk, YFLM had the potential of increasing the motivational investment of buyers with its venture into added value pork products.

6.2 The following chapters

The following three chapters explore the initial theoretical framework in the context of each case study, starting with the Society of Growers of Topfruit (SGT). The resultant discourse is a result of the collation and rigorous synthesis of a wide range of materials. The researcher has attempted to illustrate the details and rigour of the research with an end note system that is located in chapter 13. The case studies are generally structured sequentially around the research questions and theoretical framework. Initially they examine the leverage position, before looking at the implications of costs and the way the distribution of costs affects the sustainability of the cooperative. The findings appear to be out of line with the initial framework in that in each of the case studies the cooperative has continued despite its inability to increase leverage either through motivational investment or scarcity. The next three chapters will explore this facet and the reasons.[53]

[53] The roman numerals within the text refer to the endnotes which offer some of the sources of information upon which the case studies are based. This is designed to demonstrate validity of research rather than be a complete record. The names of interviews are recorded in appendix 2, but for ethical reasons appendix 1 simply makes reference to their role.

CHAPTER 7

CASE STUDY ONE - SOCIETY OF GROWERS OF TOPFRUIT (SGT)

7.0 Introduction

This chapter presents the first case study, Society of Growers of Topfruit (SGT). SGT is a society with a history spanning 5 decades and was initially established as a counter measure of head to head competition[xlvi]. However, this study is primarily concerned with the most recent period, when cooperatives were predominantly seen as a measure to counterbalance the power of an increasingly concentrated retail sector. Nevertheless, it is important to distinguish between the two periods in order to clarify the impact of the highly consolidated buyers sector, and consequently, the shift in the function of the cooperative as a mechanism to deliver benefits to members.

SGT was established prior to the entry of the UK into the Common Market, and at this stage was primarily seen to be a means to promote the improvement of farming practice when faced with the probability of high levels of competition from more efficient European growers. This role has grown, in line with more extensive market liberalisation following the Uruguay agricultural agreements of the early 1990s. Consequently, European policy makers, concerned with the potential for increased horizontal competition, began to place even greater emphasis on collective activity and launched Producer Organisations (POs) as vehicles for the distribution of EU funds and incentives for cooperative formation.

Despite receiving funds to develop husbandry methods, efficiency improvements and marketing desks, SGT saw prices deflate in line with the consolidation of the multiple retailer sector; a condition not attenuated by increasing horizontal competition from overseas substitutes. It was anticipated that SGT would become a mechanism to safeguard the position of its growers in the face of the more efficient and/or lower cost overseas growers. More importantly, that it could create relative scarcity in an increasingly consolidated market. What is clear is that despite having a significant share of the English Topfruit supplied to the second largest UK retailer, SGT has failed to deliver benefits. As the smallest agent within the sector, with limited ability to expand and with limited access to alternative distribution channels, it is unable to influence price. Its position is inhibited further by the retailer strategy of dedicated buying agents. Nonetheless it is also apparent that despite a lack of benefits, the longevity of the cooperative has not been challenged. This is firstly because of relatively low direct costs, and secondly, a consequence of the continued longevity of the cooperative, an event that is largely due to Producer Organisation status and the high costs of exit to members.

The PO status of SGT has had further implications for the leverage position of the cooperative in dealing with multiple retailers. Although exit barriers in the form of financial benefits inhibit member defection and increase the longevity of the cooperative, the relative size of the cooperative in comparison to the major buyers inhibits its ability to lever value and, moreover, has a negative impact on the prices received within the sector as a whole.

7.1 Historical background to the sector- dealing with horizontal competition

The history of the SGT cooperative spans five decades, although it is apparent that its activities, its suppliers and customer base and the market structure of its customers have changed over this period.

7.1.1 The historical structure and characteristics of the top fruit sector

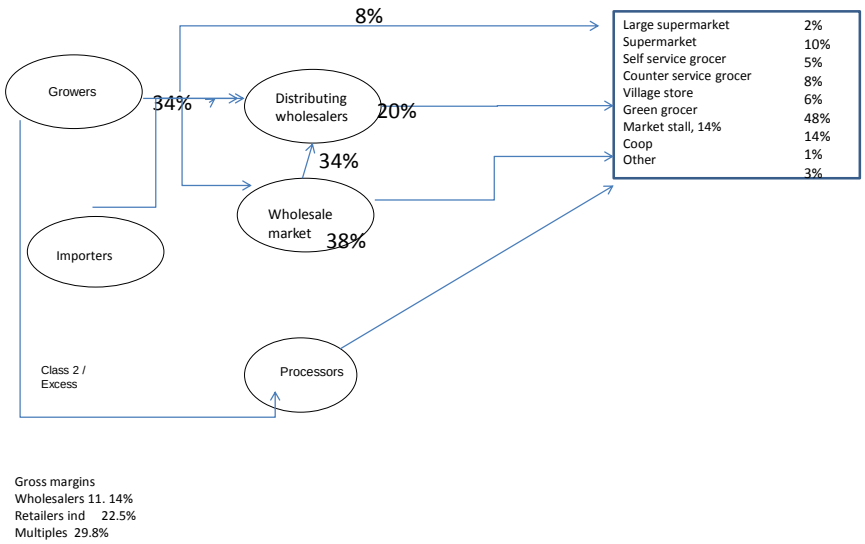
This case study examines the collective action within the top fruit sector. The term top fruit in the UK predominantly refers to apples, dessert and cooking, and pears, although in broader terms defines all fruit grown on trees. Historically, in the UK the topfruit sector dessert and cooking apples have represented some 80% of top fruit production, with the remainder in the production of pears and cider apples.[xlvii] Until the UK's entry to the EU, the growers' share of the edible topfruit market constituted around half of the total tonnage of apples and pears consumed in the UK. This case study focuses upon SGT, which was established around 1971, prior to the UK's entry to the European Market.[xlviii]

"SGT was originally set up for Geest in the days of John Leanard and Frances Nicholas…at the time they were set up this was the start of the Common Market" (Marketer SGT)

At that time the topfruit sector was highly fragmented, with many buyers and sellers. In 1967, Wye College conducted a survey which indicated that over 72% of fruit was supplied from over 1,500 growers of topfruit through to over 3,000 wholesalers, located in 37 wholesale markets. Fruit was then distributed to or collected from the wholesale markets by some 29,000 greengrocers[xlix]. The remaining 28% was supplied either direct from growers

(8%) or through growers/importers to distributing wholesalers. After succession to the EU, poorer quality fruit was sold at an intervention price to an indeterminable number of processing companies. At that time, over 85% of fruit bought by consumers was bought from independent operations of which 48% could be attributed to sales from village stores and 14% from market stalls.

Figure 7.1 Supply chain prior to retail consolidation



7.1.2 Horizontal competition and impact on the top fruit sector on entry to the European Market

The apples grown in the UK were predominantly English Cox, Russets and Bramleys, grown on low yielding standard orchards, and sales were largely spot transactions, although larger buyers would buy directly from growers or distributing wholesalers under contract.[1] At this

point in time traders were perfectly and easily substitutable because of the number of alternative suppliers and the low switching costs for both buyers and traders. Corroborative evidence is limited, but evidence from farm gate prices during the 1980s suggests that there was an equitable power relationship between buyers and sellers, with an equal distribution of economic surplus. The 1991 figures would appear to corroborate these power relations, in that average farm gate prices were high during this period and represented over 50% of the household price, at circa £585.60/tonne at a time when the household prices averaged at £1100 per tonne.[li] As such prices were at an all-time high and during this period SGT could be seen to have contributed to the equitable power balance. It had a primary function, as had the other 10 cooperatives, of promoting on-farm efficiency and safeguarding the competitive position of topfruit growers in the UK. [lii].

On the entry of the UK into the common market[liii], growers in the top fruit sector and UK policy makers became increasingly fearful of the threat from European growers. More advanced production techniques in Europe had resulted in better fruit quality, lower costs of production and with the accompanying risk of a deflationary effect on UK top fruit prices.

EU growers commenced their programme of improving production techniques in the late 1950s and had invested extensively into more intensive planting schemes and more disease resistant varieties and rooting stocks.[liv] Traditional orchards were characterised by low density planting, standard rootstocks, and less productive traditional varieties that resulted in low yields per hectare. In funding the grubbing up and replacement of unproductive orchards, the EEC had successfully enabled significant increases both in efficiencies and in

the quality of yields. France and the Netherlands and other EEC states increased the numbers of trees from around 100 to up to 1800 per hectare. The introduction of varieties such as the more disease resistant French golden delicious resulted in an increase in class 1 apples, as such varieties on dwarfing rootstocks were less prone to blemishes and other quality defaults.[lv] It was thus apparent to English growers that the threat to their livelihood was not simply a function of the lower cost of production in the EEC, but also of higher horticultural standards and more uniform characteristics of topfruit than were traditional within the UK sector.[lvi]

As a means of addressing the disparities in quality and efficiencies, SGT was set up with the support of a number of government mechanisms, including the Agricultural Act of 1967.[lvii] This act had a provision for funding husbandry methods, with priority given to cooperatives and their members. Cooperatives were seen as a mechanism through which funds might be distributed in order to improve husbandry methods, in line with European competitors. It was designed to have the dual effect increasing productivity at the point of harvesting and of increasing yields per hectare.

Corroborative literature is limited, but there are suggestions that funding initiatives were successful, at least in part. Records, which stem from the decade following the UK's entry to the EEC show that over £5 million was invested in the topfruit sector by the UK,[lviii] with the effect that average yields per hectare increased by 0.4%.[lix] The SGT Marketer and growers themselves corroborated that there had been improvements in productivity during this period.

"Farming methods became more efficient and effective and growers have a better understanding of the implications of rootstocks of volume and quality of yield, and a greater understanding of the process of storage" (Manager and SGT grower)

Nonetheless it is obvious that these increases were insufficient to redress efficiency differentials between UK growers and their European counterparts. This can be demonstrated by comparisons between the levels of intensive production within member states. Whilst in the UK intensive production of apple orchards was increased to 5.8% of the total production area by the end of the 1980s,[lx] in France and the Netherlands the area of intensive production had increased to 26.6% and 73.7% respectively, some 20.8% and 67.9% higher than their UK counterpart. The outcome of this in terms of efficiency is particularly evident when one notes that by 1992 average yields in the UK were around 50% lower than in France and other European countries. This meant that, although they did become more efficient, they failed effectively to reduce the productivity gap and thereby achieve the objectives defined by the UK government. [lxi]

Nevertheless, over the short term, collective action did stave off imports and safeguard the position of English growers. The cooperatives' hold over the contractual relationships with larger buyers, that were negotiated prior to the UK's entry to the common market, ensured for them higher prices than received by their European competitors.[lxii] The remaining sales of fruit were predominantly spot market transactions sold through the wholesale markets that became vulnerable to the of market invention mechanisms on prices under EEC regulations. Under the EEC regulation, in circumstances when prices fell below the market price agreed by the EEC commission as a result of oversupply, designated parties were given the statutory

right to withdraw fruit. This fruit was then sold on to the processing sector at what was known as the intervention price. The practice was administered by the market inspectorate, a role apparently held by the cooperatives, and one that in practice enabled the cooperatives to regulate the market in favour of the UK grower.[lxiii] When faced with the risk of the withdrawal of their fruit from the UK market, European growers switched their efforts to the world market, in which the presence of export subsidies provided greater security of returns.[54][lxiv]

The UK had persistently higher costs of production and lower fruit quality than its European counterparts, but its ability to compete was further undermined following the Uruguay round of GATT agricultural agreements, when the UK market was once again opened up to external competition.[lxv] Pressure was placed on the EU to reduce exports, since the world market was flooded with subsidised topfruit. In an attempt to address the problem of the deflation of world prices, EU policy makers had to reconsider the support given to the sector. In line with the Agricultural Agreement they reduced export subsidies and intervention pricing and reviewed and revised the function of horticultural cooperatives.

The gradual removal of export subsidies brought about greater internal competition between topfruit growers within the European Union. Export subsidies in the European Union declined by 61% between 1995 and 2000, a figure of three times the cuts agreed under the terms of the Agreement on Agriculture (AoA). This move drove EU growers to switch their

[54] Up to 50% of topfruit would be withdrawn from the market and would receive the lower intervention price

efforts towards supplying the UK market. Notably, between 1997 and 2007 the percentage of UK topfruit, as against EU or third country fruit, sold by UK retailers, had declined to around 20% of the total, a decrease of 17%. This was followed by the partial dismantling of protectionist measures like the *reference price system* and the introduction of the more lenient *entry price tariff*, which opened up the market to the underdeveloped countries. In particular, the UK saw a rise in imports from Southern Hemisphere countries, such as Chile and South Africa, of about 60%. Whilst this was a function of trade liberalisation, it had the further effect of stimulating the production of topfruit in underdeveloped *Third Countries*, with a net increase in volume of production in China of some 13 million tonnes, a figure of over 100 times the total annual UK production.[lxvi]

Measures to promote collective action were implemented in the EU and UK to encourage greater efficiency and collective marketing under regulations 2200/96 and 412/97.[lxvii] These regulations, by encouraging the establishment of producer organisations, put in place a funding instrument to further promote EU husbandry efficiencies. By the provision of the regulations, that provided 50% of all on farm and off farm investment costs, in for example, new rootstocks and varieties, husbandry methods as well as marketing costs were match funded. Under these regulations the role of SGT was extended and while earlier efforts had been focused primarily upon increasing farm efficiencies, under PO status the cooperative held a more proactive role as a countervailing force and took a more strategic view of supporting and marketing local and regional products and producers.[lxviii]

However, these changes did not appear to effectively stem the erosion of benefits and share of economic surplus and prices were seen to fall below those attained in 1980. [55] Average farm gate prices for dessert apples fell below £300 per tonne by 1994 and while prices increased to around £400 per tonne between the years of 1996-2001 (fig 7.2) they did not return to their previous levels, as a consequence of the switch by retailers to alternative marketing agents.[lxix] The position of UK growers was exacerbated further by the introduction of new technology in the form of atmospheric storage which was designed to extend shelf life, and for some varieties for year-long availability.[lxx]

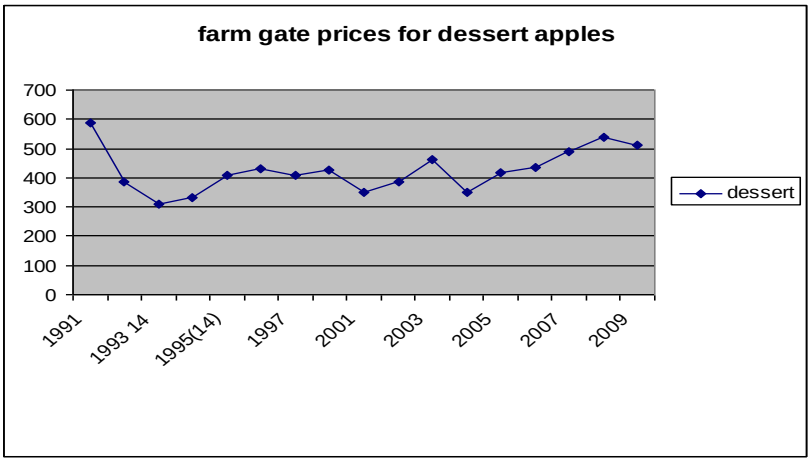


Figure 7.2: Price per tonne for dessert apples between 1991 and 2009 DEFRA and MAFF Basic Horticultural statistics

The sector was to experience another shock in the form of vertical competition. The emergent position of grocery retailers within the fresh produce sector, coupled with the inability of English growers to compete on price and quality with European and *Third country* growers, undermined the position of the cooperative still further. It is to this that our attention now turns.

[55] In this case study, benefits can be equated to farm gate prices, this is because the cooperative members are charged a marketing fee, so that the figure received by the farmer equates to the gross price that gained from the buyer (see case study 2)

7.2 Retail consolidation and the sustainability of the cooperative

However, subsequently the cooperative was to be faced with greater competition, namely head to head competition as the retail sector consolidated. Consolidation had been a gradual process, as had the introduction by the major retailers of *Fresh Produce* as a destination product, and growers continued to make substantive returns and margins. It wasn't until well into the 1990s that farm gate prices and margins started to significantly decline. Despite the inability of the cooperative to leverage price, the cooperative was sustained.

7.2.1 Retail consolidation and the ability of SGT to counteract vertical threats derived from retail consolidation

Retail consolidation has been identified as a critical factor in the ability of SGT to compete against more competent growers from the EU and developing countries. In 1996, the top 10 retailers made around 73% of food retailers' sales, but by 2006 concentration levels had increased so that just the top ten retailers held around 74% of the market. Similar figures were reflected over the same time period in the sales of fresh fruit. From 1996, when approximately 76% of all fresh fruit sold in the UK was sold by the larger multiple retailers, by 2006, just 4 retailers sold around 60% of all retailed fresh fruit. .[lxxi]

This consolidation coincided with a change in the profile of top fruit within the retail store. By 1995, fresh produce, including top fruit, had become a destination category for the major retailers, who became the key purveyors of topfruit in the UK[lxxii]. Destination products are those products that influence the consumer's choice of shopping destination. Top fruit was

now very much ‘something of a mixed blessing in that as a destination product particular care needed to be taken by retailers’ buying staff to ensure quality standards and safeguard against product wastage. [56][lxxiii]. I

The consolidation and the position of top fruit as a destination category were changes that also coincided with the Uruguay round of Agricultural Agreements. As noted earlier, farm gate prices failed to resume the levels prior to changes to EU policy during this period, in what became a “perfect storm”. That is increased global competition within the top fruit sector heightened the problem of head to head competition for SGT

Detailed analysis indicates that changes to the market structure in the context of liberalisation had a significant impact on the cooperative’s ability to create sufficient leverage to ensure returns to its members. Its situation did not seem to be helped by the decision to remain a closed cooperative with limited membership, as this placed SGT at particular risk as the retail sector consolidated. Other agents, at this time, recognised the potential threat of multiple retailers and took the option of demutualising or expanding into the export sector. [lxxiv]

In terms of the specifics as to why SGT was in such a weak position vis-à-vis the retailers a number of factors are relevant. While ostensibly SGT held a relatively unique position in

[56] Destination products are those products that influence the consumer’s choice of shopping destination.

supplying English topfruit only; this was not an effective counter balance in a situation where substitutes in the form of UK and overseas suppliers were readily available.

In addition, while topfruit has become a destination category for the retailers, there were limits to the retailers' motivational interest, even in the case of the supply of Bramley apples, a product unique to UK and promoted via the *Bramley Apple Consumer Campaign*. One senior buyer summed the situation up in these words:

"If one was not to stock it, the people would ask for it- and this would lose business to the competition... (However) Bramley is not really a critical product; it has not the same impact of not stocking coca cola".

Therefore, the retailers had readily available substitutes for SGT produce and a limited motivational interest.[lxxv]

There is another change in the market that has had a further impact upon the power resources of SGT, that of the development of category managers by retailers.

The development of this retailer controlled intermediary within the mainstream food marketing channel was a further attempt by the retailer to reinforce their power position.[lxxvi] Although there is evidence that the two category managers for Sainsbury's were also required to continually improve the quality of topfruit through working with suppliers and resolving issues such as poor handling, the primary function of these managers was to reduce the costs of purchases to their customers, the retailers.

In this specific case, SGT had to deal with category managers contracted by Sainsbury's.[lxxvii] The aforementioned primary role of these category managers is clear from comments made by category managers in the interviews:

"In order to discriminate ourselves we need to constantly protect and constantly meet the needs of our customers and seek and develop suppliers to offer value to Sainsbury's, we are constantly looking to improve value for our customers,…… We need to focus on the strategic opportunity for the buyers" (a category manager).

The concern that category managers should meet the cost parameters of Sainsbury's was reflected further in an interview with another category manager for Sainsbury's. *"The development of the concept orchard was designed to enable retailers' greater insight into growing practices and potential for efficiencies"*

These positions were confirmed by some of the growers: *"Claims were that marketeers accepted demand for lower prices, rebates and cash for market share deals from multiples, which cut heavily into growers' net returns"*

In terms of the specific effects of category managers on SGT's power resources, one grower provided a clue: *"In establishing a single supply chain, this reduced our ability to easily switch our supply to the wholesale sector in times of surplus." (Grower SGT)* This point we can now develop.

Specifically, in the case of Sainsbury's, their two category leaders, Chingfords and Orchard World, had dedicated over 90% of their business to Sainsbury's and were contractually constrained in their selection of additional buyers. Retailers, on the other hand, could easily switch category managers in a supply market that, despite the high investment costs of packhouses, would appear to be characterised by relative ease of access and exit and thus

high levels of contestation. In this situation Sainsbury's are able to switch suppliers or instigate the emergence of alternative potential suppliers, with limited cost implications.

Recent history leads to the distinct impression that they are quick to switch suppliers where expected performance measures have not been met.[lxxviii] There is a repeated allusion to this aspect of retailer behaviour, as is evident in the following discourse.

"They tend to be 2 year contracts which are awarded on a PICO basis, - the commercial goals are to achieve higher gross margins and more of market share" (R Balucki)

"Somerfield's – WWF were supplying Somerfield, got removed from this. There is a constant need to maintain services levels, businesses plans and etc. with the supermarkets". (J Morgan)

In effect, this appears to have been the situation in the case of Chingfords. Whilst Chingford Fruit dates back to 1966, its current size and turnover is purely a function of their contract with Sainsbury's. It is now one of the leading fresh fruit import and supply companies in the UK. In order to meet Sainsbury's needs and requirement they are committed to make high levels of investment both in storage facilities[57] and distribution networks. These again are dedicated to the Sainsbury's contract.

This level of investment was extended further in the early noughties when WWF (World Wide Fruit), as one of the original three category managers for Sainsbury's, was delisted and Chingfords took over their share of the supply The high levels of investment as well as the knowledge by suppliers of the risk of being delisted, allow Sainsbury's to place significant

[57] In fact this is a joint venture with a distribution company, Turners, known as Profresh

pressure on the category manager to manage transactions at the lowest price. Sainsbury's have a further hold over Chingfords, in that many of their buyers and marketers are former Sainsbury's employees.

"*Buyers for Chingfords are unlikely to put pressure on Sainsbury's since many of them are former employees" (Grower)*

"Buyers for Chingfords know our business in that many of them have also worked for Sainsbury's" (Sainsbury's buyer)

Crucially, in terms of the power resources of SGT, as a means of ensuring continuity and minimising costs of supplies still further, Chingfords encouraged SGT to reduce their customer base from four to two key retailers. In the event, the retailers chosen by the SGT board were Sainsbury's and Asda, and Sainsbury's was selected as their key customer.

Now the loss of the Sainsbury's contract would result in quite significant implications to SGT members' livelihoods. There was now a high level of fear of being delisted by Sainsbury's as it represented over 60% of SGT total sales. This, of course, further eroded the bargaining power of the cooperative.

To add salt to the wound, since the introduction of Chingfords, benefits have also been eroded due to the imposition of additional commission, which amounts to 2% on top of an existing 6%. The chair of SGT commented:

"It was clear that it was Michele of Chingford's who was the negotiator of prices with Sainsbury's, and not Derek. The original function of SGT was done by others"… "This is at the cost of an additional 2% commission on top of the 6% commission charged by SGT" (Chair of SGT)

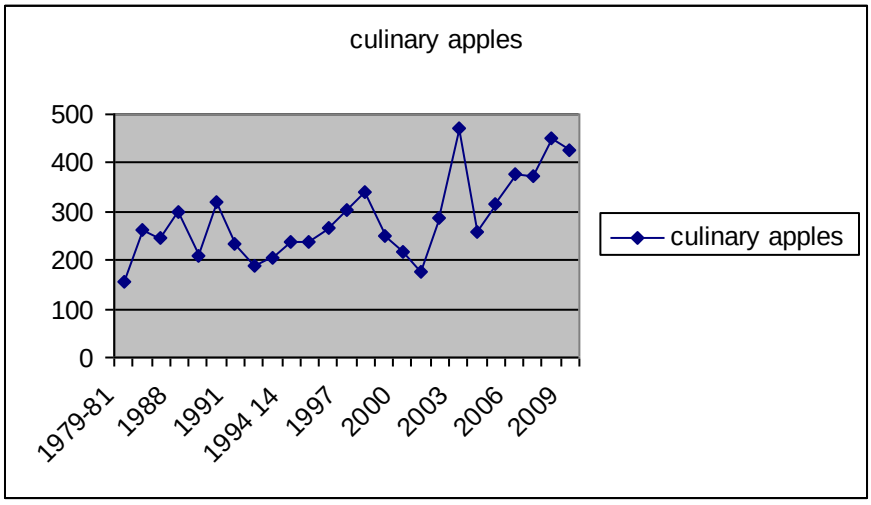
So, we see a whole host of developments that changed the power resources of the two parties in a manner that led to more and more imbalance in the relationship and, most recently, to total buyer (i.e. retailer) dominance. The commercial results have been predictable. Farm gate prices may fluctuate more for Bramley apples than for dessert apples and, in the main, show a more consistent increase over time (see figure 7.3). Nevertheless, over time the retailer's share of prices has increased for both apple categories.[58] It is notable that for all top fruit retail returns have increased by around 20%.[lxxix] Published figures show that over the last 16 years, growers' share of the retail price has declined from 48% to 30%, and Sainsbury's share has increased from 33% to circa 38-40%.[lxxx] These are however gross margins, what is significant is that farmers experience a higher share of the channel cost post-harvest, particularly since the introduction of farm gate pricing. Total post-harvest costs, including transport, grading, packaging, storage and levies, could be over £500/tonne, some 5/8 ^{ths} of the farm gate price. This is reflected in the comment of one farmer:

."Prices received by farmers are continually eroded by the increased costs of delivery to retailers, packaging, transport etc."...

The problem for SGT is that even where there are few substitutes, as in the case of Bramley apples, a product unique to UK and promoted via the *Bramley Apple Consumer Campaign*, there is limited evidence of it being able to act to change the balance of power. The countervailing forces are just too strong.

[58] There is a further intervening factor here in that the limited demand for fresh Bramleys by the consumer means that this product is extremely price sensitive, marginal increases in volume, as was apparent in the early noughties, bring about a significant decrease in farm gate prices.

Figure 7.3 Farm gate prices for culinary apples[lxxxi]



And yet, despite all this, SGT has nevertheless continued to supply Sainsbury's with top fruit for well over a decade, and when this research was carried out, there was no sign of it discontinuing the relationship or dissolving it because of lack of benefits. This is because, according to one SGT marketer:

"The costs of serving the wholesale sector would be of less interest to our members due to the high costs of managing the greater number (of wholesalers and food processors), particularly where there are no contracts" (SGT marketer)

Even the less compliant grower-members feel that while the dedication of sales to two retailers runs counter to their interest, the cost of switching or extending the portfolio of SGT deters the cooperative manager from switching marketing channels.

7.2.2. Longevity and cohesion – the cost of coalition

The cooperative has survived despite certain levels of friction between members of the board, and this could be linked to the apparently low costs of coalition. Those that are particularly negligible are monitoring, sanction and agency costs.

In the breakdown of costs the following points emerge. SGT managers are some of the highest paid in the sector, with an average salary of £44,500,[59][lxxxii] but the marketing commissions, which are in effect the direct costs charged to members, are 30% lower than those of their nearest competitors. This is because of lower staffing levels within SGT than those apparent among direct competitors and is a consequence of lower monitoring costs incurred by management and minimal intervention by managers in members' on-farm activities. In effect, this is in part a consequence of PO status, where the availability of match funding and the need to improve specifications to meet the astringent demands of retailers reduces the need for intervention on the part of the management team.

The manager has been able to reduce further the marginal costs of coalition, specifically those of transaction costs This has been achieved through both limiting the numbers of customers and, as required under the terms of PO rules, constraining members to sell all their produce through the cooperative.[lxxxiii]

[59]some 19.3% higher than the nearest competitor (Norman Collett) and some 50% higher than the WFL (Worldwide fruit; the largest player

Even if a member does supply buyers alternative to the designated retailers, contracts are negotiated individually by the member; members are required to pay a marketing commission to the cooperative even if the marketing cooperative takes no active part in the negotiations. Commission is paid at a reduced rate, but it is required to be paid on all fruit, including class 2. This means that instead of dispersing sanction costs across members, those members who consistently fail to meet retail standards, usually as a result of limited investment in physical assets, are individually penalised. This also enhances the level of satisfaction among compliant members and the coherence of the coalition.

"Derek does a good job, but that cannot be said for all,.... however this has little effect on us, the poor growers are those who bear the cost" (Grower)

SGT members experience higher marginal costs from the supply of their key customers than would be experienced in the supply of alternative customers such as wholesale and the manufacturing sectors. These are particularly found in the form of asset specific investments. Asset specific costs are higher in the supply of multiple retailers and include measures put in place to safeguard against non-delivery of the astringent variable product specification set by retailers, but high levels of contestation mean these are not idiosyncratic to the multiple retail sector; any improvement in quality of product in one marketing channel has a reciprocal improvement in others.[lxxxiv] That is to say that any improvement in fruit quality for the retailers also results in quality improvements for fruit disseminated to other wholesale/ retail/catering operations. In addition, topfruit growers experience higher costs in the supply of the multiple retail sector as a result of higher operational costs derived from the transportation and packaging requirements of the major players.

In the first instance, regarding Asset specific costs, multiple retailers demand higher specifications than regulated under the EU and the exact specifications will vary year on year according to the success of the harvest. In search of quality improvements growers look to improving both the quality of fruit grown and the quality of products delivered to packhouses from the farm. Such costs stem from a number of sources: replanting programmes in order to offer new and more disease resistant modern varieties, husbandry techniques, pre-grading techniques both during and post cultivation, and the more resilient packaging provided by a dedicated supplier to Sainsbury's.

The need for higher investment stems from the need to achieve more astringent specifications than those set down under the EU Horticultural Standards. Sainsbury's are seen to raise specifications above EU standards for class 1 fruit at will, and may do so without prior knowledge or consultation, especially in bumper harvest years, and efforts made by growers to improve the quality of production only raise the benchmark. This means that much fruit that is ostensibly class 1 can be rejected on the cusp of the quality parameters. [60lxxxv]

Cottage Farm, the SGT packhouse, was submitted to penalties of up to £20 000 if packed fruit was found to be in breach of specifications and as a result demonstrated a pattern of risk averse behaviour, which resulted in elevated levels of rejection, exacerbated when a limited throughput of English fruit drove the packhouse to seek additional customers from overseas. When fruit was rejected by the packhouse as below class 1, members experienced a high loss

[60] Around 60% of SGT fruit is packed by a non-grower member of SGT who also packs for a number of other agents including key South African importers such as Outspan.

of benefits. This was because fruit was sold daily at a spot price to the processing sector, a price subject to the level of supply at that point in time. Losses experienced by the grower as a result of packhouse rejection have increased following the removal of intervention prices after Uruguay. [lxxxvi]

Were the fruit to be sold directly either to the wholesale sector for supply into the catering and independent retail sectors or through future market contracts between the grower and processors, net prices would be higher than those received as a result of non-conformance to retailer specifications, even though the top line price drops by 50% or 70%. This is because wholesale and processing operations charge less for transport and grading.[61,lxxxvii]

These, whilst they impact on bottom line figures, because of the influence of the multiple retail sector on the quality demanded by the rest of the sector, cannot be considered as significant costs, or costs of a significant magnitude or durability.

As a means of countering the risk of stock withdrawal by the packhouses, growers have made considerable investment in pre-grading systems. [62] Fifty per cent of investment costs are found by the EU, which significantly reduces the magnitude of the investment, so that without match funding, the costs of pre-harvest or post-harvest grading systems[63] could be

[61] packhouse charges for grading for retail can be up to £100 per tonne
[62] These can be pre-harvest or post-harvest systems – pre-harvest system is a husbandry system which greatly increases the production of class 1 fruit, whereas postharvest requires investment in machinery that can be used on farm to separate out the different fruit classifications.

perceived to be excessive.[lxxxviii] Whilst PO funding does much to mitigate these costs, nonetheless growers experience a variety of escalating costs

"The income for growers is vast, for instance Ian has been helped with special tractors, pre-graders and stores paid for by the tax payer" (SGT manager)

However, they are not idiosyncratic as the grower is still able to supply additional alternative contracts with wholesalers and processors without loss of investment.

7.2.3 The longevity of the coalition, the distribution of costs to members, and non-excludability

As intended, it is the PO status that has ensured the longevity and cohesiveness of SGT. Match funds attained by growers under the PO programme are depreciated over a five year period. Were the member to leave the cooperative prior to the full depreciation of this investment, the whole asset, including the growers' personal investment, would be forfeited.

Growers are incentivised to maintain their position within the cooperative by the threat of forfeit. The need for continual investment in improvement of husbandry practices means that they are locked into the cooperative. In essence, it is in the interest of the farmer to remain a member, but in order to benefit from the cooperative he needs to draw continually upon EU funds, which further inhibits his exit from the cooperative. Yet the other 10-12 UK POs within the top fruit sector are not locked into the cooperative in the same way. Some 80% of commercial producers, a total of 240 growers, are members of Producer Organisations, including Northcourt who supply WWF and Mid Kent Growers who supply Norman Collets.

Members in many other POs are not in principle constrained to supply to their current agents, although it is rare that they switch buyers.[lxxxix]

"Growers are conservative by nature" (Marketer Orchard World)

Whilst the other 10-12 POs have the same funding opportunities as SGT, their freedom to switch agents also means the marketing agents are keen to maintain their supply. The marketing agents are not cooperatives and in order to ensure supply growers are offered greater support than offered by SGT, including the costs of running packhouses, technical developments and advice in terms of growing methods in exchange for a marketing commission, and are not seen to have a negative impact on the sector as a whole. This is recognised by the sector, as illustrated by the extract below.

"Many of the problems experienced by apple growers are a result of the producer organisations. The structure of the POs is very much designed around the European model which is that all producers in an area belong to the same cooperative" (main grower within Mid Kent growers)

7.2.4 Summary of previous sections

These findings suggest that not only has the cooperative failed to increase benefits to its members, but that the cooperative has still continued to operate as a collective. This case study shows that both high exit barriers for the cooperative as a firm and for members of the cooperative can result in the sustained existence of collective action. SGT has attempted to increase relative scarcity and motivational interest, but has not been successful largely due to

the presence of a large number of acceptable substitutes, limited entry barriers, and the risk of being delisted by the retailers. The position has been further exacerbated by the introduction of category managers and the high dependency of the cooperative on their key customer Sainsbury's. Yet, the failure of the cooperative to benefit growers has not resulted in the defection of members to alternative channels. This could in part be a consequence of low costs of cohesion experienced by members in the cooperative. Transaction costs are minimised by the management of the cooperative, whilst asset specific costs are mitigated by EU funds provided under the aegis of their Producer Organisation status. However, the longevity of the cooperative members is not simply a function of cohesiveness, but due to high exit barriers imposed through PO status.

7.2.5 Impact of the longevity of the cooperative on the sector as a whole

Yet, the longevity of SGT has a negative impact on the leverage position of the sector as a whole. Where cooperatives, such as SGT, experience high costs of switching buyers, buyers are presented with the opportunity to place greater pressure on prices paid to farmers. The failure of the cooperative to switch buyers has a negative impact on the prices received by all agents. This position is further exacerbated by both the low search costs for the retailer that stem from the proximity of the relationship with Chingfords, and the transparency of the sector and the costs of production. In the last instance, a demonstration and experimental orchard, run on behalf of Sainsbury's by Orchard World, enables the retailer not only to understand the current implications of weather, husbandry systems on UK production, quality and costs but also makes it possible to examine ways to cut costs and thus prices still

further. Other marketing agents have demutualised and/or extended their supply base to include overseas growers, in an attempt to shift power balances albeit marginally, but as the smallest agent, with a membership restricted to 20 growers and a larger proportion of its supply locked into one buyer, SGT not only failed to increase surplus for its own members but undermined the position of others.[xc] The former cooperative Home Grown Fruits/Northcourt growers became Worldwide Fruit, and on its demutualisation and merger with ENZA had the opportunity to gain access to funds from external investors. This allowed the former cooperative to invest in facilities and infrastructures and thereby generate greater efficiencies of scale. [xci]

"The reason they demutualised was to increase flexibility and drive the value of the company. There are 5 directors, employees are employed under Worldwide Fruit, this mitigates against risk of investment, and the profits in the bigger company. Profits can be as much as £1/2 million" (R Balucki)

However, whilst this action did improve efficiency and increased margins, any advantage gained was quickly curtailed on the delisting of WWF. In increasing Chingford's proportion of their market share and by stipulating that SGT should remain as a key English fruit supplier, the increases in investment in facilities that were dedicated to Sainsbury's further increased the dependency of Chingford. The reliance of both Chingford and SGT on the Sainsbury's contract when faced with fear of delisting persuaded Chingford to place greater pressure on SGT prices.

Led by the high levels of transparency of information within the sector, and the apparent readiness of the retail sector to switch suppliers: Asda, for example, has switched its fruit suppliers twice in the last 6 years, the net impact, despite the presence of the lobby group English Apples and Pears and considerable media attention, is a deflation of the price for topfruit across agents. What is being evidenced and is substantiated by DEFRA statistics is a negative yardstick effect which is at least in part attributable to the presence of SGT in the market.

7.3 Lessons Learnt

The examination of SGT shows limited evidence that the cooperative has at any stage of its history successfully increased benefits to its members. None the less the cooperative has continued to operate as a collective for the last 40-50 years. This case offers an interesting insight into the ability of a closed member small cooperative to increase relative scarcity. In this case study, we learn that both high exit barriers for the cooperative as a firm and for members of the cooperative can result in the sustained existence of collective action but this may be to the detriment of the sector as a whole. These lessons are explored in more detail below.

7.3.1 Creation of leverage through absolute scarcity/relative scarcity and/or motivational interest

The findings in this case study are that SGT has attempted to increase relative scarcity and motivational interest, but has failed predominantly because of the presence of a large number

of acceptable substitutes. Even with the support of the *Bramley apple campaign* and *English Apple and Pears Ltd*, the consumer is not significantly swayed by distinctions of provenance. The apparent consumer indifference to provenance means retailers are able readily to substitute suppliers from around the globe. The ready availability of alternative suppliers, particularly since Uruguay, means that agents face the continuing threat of being delisted by the retailers, in a market where there are not only limited entry barriers but few alternative buyers, a position that has been reinforced by the creation of category leaders. This is because category leaders that are required by contract to dedicate or largely dedicate their supply to one retailer are particularly vulnerable to post contractual hazards. Their high dependence on one income stream means that as a consequence they are encouraged to place pressure on farm gate prices. However, the failure of the cooperative to benefit growers has not resulted in the defection of members to alternative channels. This has not occurred, which might suggest that members are not acting according to the principles of calculative rationality. However, on further investigation this appeared not to be the case.

7.3.2 The longevity and cohesion of the cooperative

The case material suggests that member loyalty is not a function of the receipt of benefits, but of the significant financial penalties if the cooperative member were to leave. The exploratory model suggested that the cohesion and thus the longevity of the cooperative would be undermined were marginal costs to exceed marginal benefits. In this case, findings suggest that transaction and agency costs incurred by members are not in excess of marginal benefits and indeed are comparable to those incurred by the UK farmer who is outside the

cooperative. This condition is not replicated however in the case of asset specific costs, but these are of a lesser magnitude as a result of match funding under the PO framework. Nor are they idiosyncratic investments in that as retail specifications become more stringent there is a corollary effect across all retail formats. This suggests that asset specific investments made by members are not costs but exit barriers in that members would incur double the amount of asset specific costs were they to attempt to defect. The cooperative is thus sustained not because of the ability of the cooperative to generate benefits, or even possibly due to low marginal costs over marginal benefits, but due to high exit barriers imposed through PO status.

7.3.3 Problems of non-excludability

The presence of exit barriers for members has had an impact not only on the prices attained by members but also by non-members, The presence of exit barriers has had a deflationary impact on prices for the sector as a whole.

External free-riding or the *Yardstick effect* is normally considered to have an inflationary impact on prices for a commodity sector, in that it offers an alternative buyer to farmers (Nourse, 1945). This case suggests that the inability of SGT members to switch to other agents means that in an already highly contested market, where suppliers are under constant threat of being delisted, the presence of the cooperative has the reverse effect to what might have been predicted.

7.4 Conclusion

This case study was selected because as one of the very few suppliers of English only top fruit and a closed member cooperative, which constitutionally constrained member defection, existing literature suggested that there was a potential opportunity to improve leverage. Intuitively, it was felt that the formation of the cooperative, particularly where consumer interest in British food and provenance had been heightened by the media and pressure groups, would have a positive impact on their leverage position. Furthermore, both the literature on *Entrepreneurial Cooperatives* and the exploratory model suggested that in restricting its membership the so called closed membership cooperative would be able to more effectively restrict supply of topfruit to the retail sector and increase relative scarcity. Lastly, it was believed that that the constraints on member defection would constrain the lack of cohesion within the cooperative: a dimension found within existing literature to undermine both the longevity of the cooperative and its ability to generate benefits.

However, these preliminary ideas relating to the success of cooperatives are not evident within this case. What is apparent is that cooperatives can survive even where they are unable to lever any benefits for their members. Indeed, where cooperatives enforce cohesion, cooperatives can be seen to survive despite a detrimental effect on the sector as a whole.

Clearly this case study provides interesting insights for the development of understanding of the factors affecting the ability of, in this case, transitional cooperatives.

CHAPTER 8

CASE STUDY 2 FIRST MILK

8.0 Introduction

The next case study examines one of the three cooperatives that emerged out of *Milk Marque* in 1999. First Milk remains one of the two largest milk cooperatives in the UK and operates particularly in the South Wales, Cumbrian, and Scottish milk fields. This case is used to explore the value of the cooperative as a mechanism to improve the profitability of dairy farmers in a sector which traditionally has been vulnerable to post contractual hazards. The cooperative was, at the time of the research, one of the larger *traditional* UK Cooperatives. However, it was believed that the introduction of external funding, mainly from the Welsh Assembly, would have attenuated the problem of internal freeriding normally found in *traditional* cooperatives that are reliant on members for additional funds for investment.

The case first examines the period prior to First Milk, during which collectives either possessed market power in the end market in addition to control of the milk supply, or, simply, had control over the milk supply. To this end, attention is drawn to both previous collectives: *the Milk Marketing Boards* and *Milk Marque*, and shows how the decline of doorstep deliveries and the emergence of a highly contested retail sector have significantly impacted the power leverage position of First Milk and other key cooperatives within the sector.

At the time of the English and Welsh Milk Marketing Board (EWMMB), and price subsidies from the EU, farm gate prices had been successfully fixed through the control of milk supply and the subsidisation of excess, but this changed after the Uruguay round of agreements on agriculture. With the removal of export and price supports systems the UK government opened up access to milk supplies.

It achieved this by disbanding the MMBs and by the promotion of a number of voluntary cooperatives and dairy organised milk groups. Of these, Milk Marque was the largest, with initially over 80% control of the supply of English and Welsh Milk. As a consequence, Milk Marque was able, over the short term, to increase farm gate prices. Over the longer term, their key customers, when faced with highly inflated milk prices, bypassed the cooperative and attained a direct supply from farmers. This led to the erosion of membership, as the larger farmers, enticed by attractive payment packages, left the cooperative to supply directly to the dairies. As *Milk Marque's* percentage of market share of supply declined, so too did x-efficiency levels, a factor exacerbated by rises in transportation costs based on increased fuel costs.

Counter measures of forward integration by *Milk Marque* were thwarted by a Competition Commission report in 1999, with the resultant emergence of *First Milk.* However, even on the acquisition of milk processing facilities and a 33% market share in UK cheddar cheese production as well as a majority share of milk supply, the cooperative has failed to realise the benefits anticipated. This failure may be attributed to the emergence of a dominant retail sector across dairy products and increased contestation across the dairy processing sectors,

as well as the onus on *First Milk* to invest heavily in processing plants in order to achieve comparable levels of technical and x-efficiency. Their position was made worse by higher investment costs and problems in raising sufficient funds.

Up until now, the cooperative has continued to survive, although other cooperatives, such as *Dairy Farmers of Britain*, have failed. It is notable that the cooperative fulfils the two important roles of sustaining farmers located in remoter areas and as a mechanism to manage seasonal over supply through redirecting excess milk to produce butter and skimmed milk... In this case study, there is again evidence to suggest that the cooperative has influenced prices for the sector as a whole. The rest of the chapter will explore how the failure to deliver benefits to members is a function of the inability of the cooperative to increase leverage against the retailers when faced with increasing marginal costs and heavy investment into new ventures and plants.

8.1 Historical background to milk supply within the UK and how early cooperative measures successfully addressed power imbalances

This second case study examines collective action in the Dairy sector and examines the position held within the exploratory framework that in order that cooperative activity be effective, the coalition needs to generate sufficient net benefits to maintain cohesion, and those benefits should be exclusive to members. This case study specifically focuses upon one of the most recent cooperatives, *First Milk*, established 1999-2001. The history of collective action within the dairy sector has spanned well over 80 years, in which initial efforts to close the market through monopolistic activity began in the early 1930s with the establishment of

the *Milk Marketing Boards*.[xcii] They were eventually dismantled, following the drive to increase the competitiveness within the dairy sector in response to the Uruguay round of agricultural agreements.

"you had statutory boards, it was before my time but you remember the milk marketing board, it gave some sort of protection to price ... but what it lacked was some entrepreneurship" (Mansell Raymond)

8.1.1 The historical structure and characteristics of the Dairy sector

The establishment of cooperatives for the protection of farm gate prices has been particularly important in the dairy sector. Milk is not only highly perishable, but is "harvested" once, twice or even three times a day for the 10 months of lactation, with peak periods of supply during spring and early summer months. These factors mean that farmers need to dispose of the product rapidly, which makes them particularly vulnerable to post contractual opportunism and thus the risk of low farm gate prices. The logistics of the problem have been made more difficult by the move of rural populations to urban conurbations ever since the growth of industry in the 19th century.

In the UK there was and is a strong tradition of liquid milk consumption. It constitutes 50% of all milk supply, with cheese and butter traditionally produced during the spring and summer months as a means of reducing excess. Following the industrial revolution, it was necessary to supply liquid milk to urban populations, and this wrought a significant change to channels of distribution.[xciii] In pre-industrialised Britain, the dairy sector was highly fragmented and creameries were located in most market towns, and were supplied by an

even more fragmented sector of mixed farming[64]. The farmers themselves also sold milk and cheese direct to consumers.

However, increased urban demand brought changes to distribution and the development of railway dairy networks. The relocation of dairies to urban areas made it possible to supply liquid milk to the mass populace in urban areas.[xciv] This change was made possible when marginal costs of transportation could be minimised. The minimisation of the cost of transport was a factor critical to milk as a product of which 90% is water. The development of a railway network was only feasible where there were sufficient volumes of milk to be transported and where there were adequate funds for the investment.

The requirement for significant investment in collection dairies, dedicated railway terminals, rail stock and urban dairies endorsed the need for consolidation within the dairy sector and the formation of national dairy companies such as *Express Dairies*. By 1930, in the UK, the number of dairy companies had declined, with key players such as Express Dairies, United Dairies, Nestlé, Cow and Gate, and CWS taking a large share of the market[xcv]. By comparison with today's market structure, the sector still remained relatively fragmented, with more than 9000 small businesses, such as St Ivel, Buttercup Dairies and Cheshunt Dairies, as well as smaller family firms located in most market towns and villages, but there was consolidation nonetheless.[xcvi]

[64] Usually the terms used respectively to denote collation and processors of liquid milk and cheese/butter producers

The consolidation of the dairy sector resulted in a shift in power and loss of income for farmers. This was at least in part a consequence of a clear bifurcation of milk and cheese distribution systems. Milk destined for consumption as liquid milk, around 50% of the volume, was sent by rail to urban dairies, whilst milk destined for cheese production continued to be located near the sources of supply.[xcvii] This meant that once milk was sent by rail to urban dairies, supplies could not easily be switched to alternative markets. As a consequence, where milk was found on arrival at the urban dairy to be in excess of demand, if the milk was retained by the dairy, farmers were forced to take a price which barely covered the cost of production, or if returned, would suffer complete loss of earnings.[xcviii]

One particular offender was Nestlé, who persistently reduced the price paid to farmers to below the cost of production once the milk had been dispatched. Farmers had become particularly prone to moral hazard as the dairy sector continued to consolidate during the First World War and the Great Depression.[xcix] To address these issues and ensure the continuity of supply, the UK government established 5 marketing boards[65]who had the statutory right to purchase and collect all milk sold across the UK.

In establishing the MMBs the government was able to reverse power imbalances, a position that was enhanced by the adoption of a tendering system for buyers and forward integration.

As suggested by a Farmer Director for First Milk, *"It gave some sort of protection to price --- again it gave some sort of profit".*

[65] Of which three were established in 1933, including the EWMMB (the English and Welsh Milk Marketing Board, the Scottish Marketing Board, the North of Scotland Milk Marketing Board and the Aberdeen and District Milk Marketing Board. The Northern Irish Milk Marketing Board was not established until the 1950s

8.1.2 Horizontal competition and market liberalisation

Sixty years later, these statutory monopolies were superseded by a more liberalised market, characterised by both non-cooperative dairies and voluntary bargaining cooperatives such as Milk Marque. This was driven by the perceived need to increase the level of contestation within the dairy sector with a view to promote innovation and efficiency.[c] The sector, although strongly protected from overseas competition by both EU price subsidies and the Milk Marketing Boards, was forced under the Uruguay agreement to decrease direct support to farmers. EU price mechanisms had stimulated the production of milk well in excess of demand.

Within the terms of the Common Agricultural Policy, all excess supply was bought under intervention price systems for the production of butter and ingredients and sold on the world market. The introduction of a large volume of dairy products, including butter and skimmed milk, on the world market had the effect of deflating world prices. The British demand for pasteurised rather than UHT milk may have exacerbated this problem. This is because milk is naturally a seasonal product and in traditional spring calving systems, when cows were dried off during the winter months, production volume would drop. In order to have sufficient volume throughout the year, farmers would increase their overall production capacity, thereby increasing production in the summer months in excess of demand. There was an attempt to reduce overcapacity through milk quotas and legislation designed to promote competitiveness between EU dairy companies, but these failed to address the

problem.[66] The protectionist measures had further implications. Price support systems and the lack of global competition have significantly impaired technological and product innovation. As one farmer commented:

(protection supported prices, but o*n) " the down side you were relying then on private sector, PLCs to develop added value and the incentive wasn't there because basically prices were set and if you didn't sell liquid milk on the door step you turned it into powder and you got intervention for it, didn't you. Once you got into CAP, there was no incentive for added value whatsoever" (Farmer Director, First Milk).*

This led to the decision to deregulate, a strategy that coincided with the entry of European dairies into the UK market through a series of acquisitions and mergers, a necessity for the EU dairies if they were to access the UK market. [ci]

In 1994, Milk Marque took over 80% of the supply originally controlled by the EWMMB and initially increased benefits to its members.[cii] Average farm gate prices rose between 1994 and 1997 by between 11% and 16%. Furthermore, UK farm gate prices were higher than average prices received by dairy farmers in nearly all other EU member states.[ciii] Milk Marque, under terms laid down by the Conservative government of the time, was divested of the EWMMB processing capacity, but sustained its leverage position by charging higher prices to liquid milk dairies that required a continual supply of milk throughout the year.[civ] The prices were determined by an auction system but were differentiated according to the

[66] There was a directive which allowed the free trade of UHT Milk across the EU, however at this point only 1% of sales of all milk in the UK was UHT, this hindered effectiveness of this legislation

buyer's need for continuity of supply. Prices demanded for the so called "market led" contracts that required a level supply throughout the year were notably higher than for supply led contracts. This mechanism was primarily devised to encourage greater demand for milk during peak periods of production and prices.

Market conditions were becoming increasingly concentrated and contested by 1999, where the 4 largest dairies held 51.7% of the market share in a period where dairies predominantly delivered directly to the doorstep of consumers. [cv67] Liquid dairies were investing heavily in both acquisitions and mergers and in new processing plants and became increasingly unwilling to be held hostage to premium milk prices.[cvi] Dairies, which required a continuous supply and therefore were paying more per pint than their counterparts in cheese and ingredients, were unable to substitute UK grown milk with imports and sought to bypass Milk Marque by encouraging farmers to supply them directly.

Farmers were incentivised, through the medium of preferential pricing and interest free loans, to form dedicated milk groups, by a number of dairies including those of Nestlé and Northern Foods. This was of particular interest to larger farmers who, within the pooled farm gate pricing systems operated by both the MMBs and Milk Marque, saw that they were required to shoulder a greater proportion of the burden of transport costs. This became an issue of particular significance following the switch from rail by the milk supply chain following the Beeching Report.[cvii]

[67]: Express dairies, Avonmore, Unigate and Dairy crest who had broadly even shares of the market, 68% was held by the 7 largest.

The non-cooperative dairies reinforced this fear by producing a now standard package of incremental prices depending on milk quality, volume of collection and an agreement to every other day collection, replacing the one size fits all payment system. Over the period from 1996/9 the dairies engineered the defection from Milk Marque of over 1300 members, thereby reducing the membership by a third by 1999 from around 4500 at the point of establishment, and consequently augmenting levels of productive and x-inefficiencies within the cooperative.[cviii] Whilst it was quite generally believed that the failure of Milk Marque was a consequence of opportunistic behaviour of rivals, this point was put succinctly by one farmer director for First Milk.

"Yeh I have had that from more than one source, We pay the penny a litre because it will take us three years at least to poach the members away from Milk Marquee and then we are in control we can recoup all that we have paid over and above"

In the absence of processing capacity, but with a high dependency on the four key dairy companies who held around 60% of market share[68],[cix] the cooperative was unable to generate net benefits to members and this led to even greater levels of defection. Those who left the cooperative were the largest, most accessible farmers, chosen on the basis of the volume of milk produced and the proximity of the farm to centres of population. This tactic ensured that the haulage costs were lower than those experienced by the cooperative members.[69cx]

Price differentials between Milk Marque and the dairies/creameries in 1994 were at 1.44 pence per litre; these were raised by 1999 to 2.34ppl. Although prices paid by Milk Marque

[68] Express Dairies, Robert Wiseman, Unigate and Dairy Crest

[69] It would appear that the defection was despite measures introduced by Milk Marque requiring that farmers notified the cooperative by a specific calendar date, if they planned to switch buyers within the preceding 12 month period.

increased per litre during the period of 1994-1996, by 1997 prices began to be eroded to below the cost of production. In effect, the defection of the larger farmers was not in the interest of the collective as a whole. Attempts to halt the defection and protect net benefits through modernising the payments systems and acquiring processing facilities were thwarted.

In terms of the latter, Milk Marque had acquired processing capacity at Aeron Valley and North Brandon farms, giving an estimated capacity for the manufacture of 15,000 tonnes of cheese, with the intention of developing the butter and skimmed milk product sector, probably in order to influence the intervention price on butter and skimmed milk through the development of state of the art facilities.[70] [cxi]

However, this venture was to fail, as dairies/milk processors, who were fearful that they might lose control over both milk supply and retail, appealed to the Office of Fair Trading to investigate the potential for anticompetitive behaviour. The OFT investigation took place in 1996 and the findings were that only if the cooperative were to subdivide into smaller business units would forward integration be permitted.[cxii]

8.2 The emergence of First Milk

The core of this case study examines the ability of First Milk to generate leverage through relative scarcity through either control of a proportion of the supply of milk or through the

[70] The Intervention Milk Price Equivalent is calculated by allowing for processing and manufacturing costs; if these are lower this in effect raises the IMPE. The IMPE is a derived milk price, and the milk price it delivers is dependent on a number of variables, including product yields, butter and SMP manufacturing costs, and manufacturing profits (MDC, 2000).

delivery of added value products. It also examines the development of branded cheddars in the context of increasing leverage through the improved motivational investment of retailers. First Milk has been unable to act as an effective counterbalance, and the findings suggest competitors have successfully encouraged members to defect, which has threatened the longevity of the cooperatives, as this has augmented cost of membership for the remaining members.

8.2.1 First Milk and its ability to counteract vertical threats derived from retail consolidation increasing scarcity

Three cooperatives emerged from the dismantling of Milk Marque, which were First Milk (Axis), Milk Link and Dairy Farmers of Britain (Zenith), who respectively covered Wales, Southern and Northern England. However, by 2002, a series of mergers with other cooperatives established in 1994, including the Milk Group and Scottish Milk, resulted in three key cooperatives that drew from milk fields across the whole of mainland Britain, all of which survived until 2009.[cxiii] These were Dairy Farmers of Britain, First Milk (Axis) and Milk Link, all three of whom, in a strategy of forward integration, invested heavily in all three dairy sectors: milk, butter, skimmed milk powder and cheese. The expectation was that through forward integration First Milk would: a. increase scarcity, both through the creation of an alternative marketing channel, as well as through its role as a milk balancing mechanism during periods of seasonal excess, b. increase their share of economic surplus through the elimination of intermediaries, and c. reduce marginal costs through the reduction of costs of transportation in locating processing of, in particular, creameries close to the more remote milk fields.[cxiv]

While the cooperatives bought facilities close to remote milk fields, they failed to deliver benefits to members. This was in part a consequence of the switch by consumers from daily doorstep deliveries to biweekly purchases from retailers during the twenty year period between 1984 and 2004. This shift in consumer purchasing behaviour had a significant impact on the distribution of power within the supply chain. Were the dairies to have remained the predominant distributor of milk to consumers in a market with low levels of contestation, the action of forward integration might have effectively increased leverage of the cooperative against its principal competitors. This, is in line with existing research findings, suggests that only where there is both control of the aggregate supply and forward integration with direct supply to the consumer can cooperatives hope to effectively increase benefits to farmers (Cook, 1995; Bijman, 2002).

The decline in doorstep deliveries took place over a number of years. In 1984 doorstep sales accounted for 89.8% of milk sales;[cxv] this had fallen to 45% by 1995, and fell further by around 50% to 22% by 2000.[cxvi]. It wasn't until 2004 that retailers dominated the sector with a 90% share of the liquid milk market, of which just less than 50% was bought from the largest 4 companies.[cxvii] This shift towards retail sales brought about a number of challenges to dairies in a market where a high proportion of the products were sold under multiple retailers' own labels.

It also triggered a series of exits from the dairy sector. Some players, like Unigate, moved into food processing. For the consolidated sector that remained, the retailer switch to own label milk increased costs of supplying milk whilst at the same time increased the cost of

switching for suppliers, and eroded the dairies' proportion of the surplus. Evidence supplied by DairyCo, a quasi-government organisation that ostensibly represents the interests of the Dairy industry, demonstrates how the share of surplus of processors between 1995 and 2009 has decreased from 38% to 29% of the milk price, with a more dramatic increase for retailers from 3.1% to 34.9%. These changes are summarised in figure 8.1 below.[cxviii]

Figure 8.1 comparisons of retail, wholesale and farm gate prices and margins

	1995			1996			1999			2006			2009		
	ppl	margins	% ppl	ppl	margin	ppl %	ppl	margin	ppl%	ppl	Margin	ppl%	ppl	margin	ppl%
Farm gate price	24.5		58.2	24.9		56.6	17.8		43.8	18		34.9	23.8		37
processor price	40.8			40.4			32.7			36			42.7		
processor margin	16.3	40.75%	38.7	15.5	38.4	35.2	14.9	46	36.6	18	50	34.9	18.9	44	29
retailer price	42.1			44			40.6			51.6			65.1		
retailer margin	2.1	3.1%	3.1	3.6	8.2	8.2	7.9	20	20	15.6	30	31.2	22.7	34.9	34

In line with other products, the key retailers consolidated their milk supply base and implemented a strategy of nominating category leaders, thereby enhancing their position of leverage.[cxix] This had the effect of concentrating milk supply into the hands of three key suppliers: Arla, Wiseman and Dairy Crest, who held 90% of the supply of milk. Whilst it might have been expected that single or dual sourcing strategies might reverse the power balance in favour of the dairies this has not proved to be so. This is because in order to service the needs of the retailer and meet their capacity requirements, dairies have needed to invest heavily in state of the art facilities, both to increase their capacity in order to supply the heavily concentrated retail sector and as a means of reducing costs of production in order to increase their declining margins. [cxx]

Between the years 2001-2011, Robert Wiseman invested £1 bn on the development of their 3 key plants of Bridgewater, Manchester and Droitwich in order to meet the demands of their three key customers. [cxxi] The net result may have weakened their position in relation to their customers. They may supply 30% of all retail sales, which amounts to some 1.545bn litres per annum, and supply Sainsbury's and Tesco respectively with 50% and 45% of their volume sales, but this has not led to a strong leverage position, and evidence suggests that this is because of the costs of the heavy investment into the new state of the art dairies which were needed to allow Wiseman the opportunity compete in highly contested horizontal markets.[cxxii] The establishment of new dairies has enabled Wiseman to reduce processing costs of milk by 3p a litre[cxxiii] but this had little impact on their margins. Their position appears to be weakened further as retailers switch, with apparent ease, between the three key

dairy companies. It is notable that Sainsbury, for example, shifted a third of their supply, making a 50:50 split between Dairy Crest and Robert Wiseman in 2004.[cxxiv]

As a marketing manager in FM commented, *"There is a risk, Asda and Tesco can kick one out, at the moment prices are going upwards because of under supply, which is different than from the previous 5 years but this is because people are trying to get bits of their business which is stupid because the buyers will simply exploit this" (First Milk marketing manager)*

In the same year, Tesco consolidated its supply base and cut the number of their suppliers from 3 to 2.[71] Others, such as Asda, moved to single sourcing, supplied through Arla, but are not locked into the exchange relationship. Retailers are in the power position to put pressure on wholesale milk prices and this in turn deflates the prices paid to the farming sector.

In order to reduce their heavy reliance on the dairy companies and gain a share of the wholesale price, First Milk and the other two large milk cooperatives have attempted to redress the power imbalances and invest into the Dairy processing sector. The cooperative has failed to stem member defection but has continued to pursue a strategy of forward integration. Yet unlike its sibling cooperatives, the First Milk board shunned direct investment in a highly contested processing market, but instead invested in existing milk processing companies over a number of years.[cxxv] Beginning with the merger of Axis with Scottish Milk in 2001 to form First Milk[72],[cxxvi] it acquired shares in Robert Wiseman and has made more recent investments in joint ventures with Milk Link and Arla at Westbury Dairies.

[71] Arla and Robert Wiseman
[72] One of the cooperatives which emerged from a Scottish MMB

The merger with Scottish Milk strengthened the position of First Milk in that it increased its share of UK milk supply to 18%, with potential sales of at least 2.2 billion litres from 4500 members. It also opened an avenue into established interests in liquid milk dairies, and cheese, butter and ingredients processing. Scottish Milk operated a wholly owned dairy which produced 30 million litres of Scottish milk, UHT milk and butter, and had an 80% interest in McClelland and Son who ran the Scottish Pride cheese production. Scottish Pride had been formerly owned by the Scottish Milk Marketing Board but had become Scottish Pride PLC following deregulation. However, the firm ran into financial difficulties in 1997, and the production of cheese and butter once more came into the hands of Scottish Milk.[cxxvii]

The merger of Axis with Scottish Milk, to become First Milk, did not, however, offer the cooperative any share of the higher value liquid pasteurised milk processing, although it provided a means of reducing the milk excess. The limited processing capacity of circa 200 million litres per annum and lack of state of the art processing facilities meant that they had no influence over butter and skimmed milk powder intervention prices.[cxxviii] None the less the merger did facilitate their market entry at a more prominent level. One farmer in Whitland said of the merger:

"I was very enthusiastic because we were struggling really as a small cooperative within a very large pool. They brought proper experience in terms of managing these processing units – I am quite keen to see our milk being processed by our organisation, a cooperative, simply marketing the milk was never top of my priority list"

The decision to acquire a 15% share of Robert Wiseman, by First Milk in 2004, was a further attempt at forward integration without the extensive investment required from a new start up. In acquiring shares in Robert Wiseman and a place on the board, the directors perceived that net benefits would rise in line with such factors as reduced costs of negotiation, and greater control over the prices paid to farmers by the dairy as well as on the ability to pass on to farmers a proportion of the share of processing returns earned through their investment.

However, whilst this manoeuvre substantially reduced initial investment, First Milk failed to recognise that benefits to be attained had been seriously eroded by the consolidation of, and contestation in, the retail sector. As a key supplier of liquid milk to Sainsbury's, Tesco and the Coop, it was envisaged that investment in Wiseman would provide them with sufficient leverage to increase net benefits paid to members, and although the value of their investment in Wiseman substantially increased during the first 7 year term, it is apparent that First Milk has from the start been unable to translate these gains into farm gate prices.

It can be seen that despite supplying 15-20% (some 340 million litres per annum)[cxxix] of their total supply of liquid milk to Robert Wiseman, a figure that represents a 22% share of the Wiseman milk supply and thus 7.5% of the total [cxxx]supply of UK liquid milk, the farm gate price of 24 p per litre for members supplying the Tesco contract was 3.77p lower than the price offered under the Dairy Crest Sainsbury's contract for direct supply.[cxxxi,cxxxii] Though 24p per litre represents a higher price than the 17.15p per litre received by many First Milk farmers, members consistently receive farm gate prices within the bottom quartile of the

price league, a factor linked to the high cost of investment of forward integration on their entry into the milk and other dairy units. In comparison with farmers supplying direct to Wiseman, on average, First Milk farmers receive some 3-5p less per litre.[cxxxiii]

That current prices offered by Wiseman are some of the lowest of the sector would appear to be a function of retailer price wars and its dependence upon the retailers. This can be shown in particular by events in August 2008, when despite a steady increase in prices since the unprecedented low price of 17.15 p litre in 2007,[cxxxiv] Robert Wiseman was forced by Tesco to introduce a new stock keeping unit, that of Fresh and Low, which was sold by retailers for just £1.06.[cxxxv] Although claims were made at the time that this deal had not in effect undermined the farm gate price, the price for both farmers supplying direct to Wiseman and those who used the intermediary services of First Milk fell by 10% to 21.4p per litre for First Milk members, and became one of the lowest paid in the country.[cxxxvi]

It would appear that despite investment in the liquid milk processing sector, the cooperative has consistently found itself unable to aggregate supply in conditions of highly contested retail and dairy sectors with few alternative buyers. It is apparent that its inability to perform on price against companies who are in effect competitors, such as Robert Wiseman, Dairy Crest and Saputo in Wales, is a function of their investment strategy.[cxxxvii] Members, in particular larger farmers, unlike those who supply direct, are required to bear a proportion of the burden of the costs of investment.[cxxxviii] This was expressed in the following terms by a larger Pembrokeshire Farmer.

"The capital contribution we are having to make to buy our processing has taken 1.5 -0.5 pence a litre from us and they say enough is enough. The price that we are contributing to sort of get into the market, it is now that we really should be seeing payback time. This, the capital we have being putting in, the fact that we have stuck with them, it should be now moving up in the price range, we should be moving up well."

Many farmers expressed dissatisfaction with the level to which they were expected to invest in the First Milk business. A farmer who farms 320 acres with 155 cows in Scotland said "(burden of cost of investment) *it was as high as 1p per litre, it is currently at 0.5p per litre, but it was as high as 1p per litre which would be over 2 years ago."*

In effect, they experience higher marginal costs, as a function of collective action, than those who supply alternatives. This is the result not only of investment by First Milk in the dairy sector, but also of high levels of investment within cheese production.

The cooperative has latterly invested heavily in cheese production and in particular in branded cheese production. This initiative was undertaken to, on the one hand, improve leverage by removing excess milk at periods of surplus and mitigating the fall in milk prices and, on the other, improve leverage over the longer term increase in motivational interest of the retailer as the regionally branded cheeses become more established in the eyes of the consumer. The investment in production facilities in close proximity to the remoter milk fields was thought to have the additional benefit of reducing the cost of collection, which would further enhance the farm gate price.[cxxxix] The same Scottish farmer suggests this when talking about the investment in processing: *"First Milk has always sold it as a basis to increase the milk price. In reality it was to stop the milk price dropping any further, if that makes sense --with the cost of Haulage"*

The net effect though was to reduce perceived net benefits, as members unilaterally shouldered the costs of investment. Other initiatives to reduce transport costs included a joint venture with Dairy Farmers of Britain which was designed to save over £8 million a year in haulage. This was in addition to the procedures of milk swaps; agreements between cooperatives to collect the milk from farmers outside the group as though it was under the collector's contract.[cxl]

Current restrictions on access to funds experienced by traditional cooperatives, for whom external funds are restricted to short term bank loans, has resulted not only in a position of high financial leverage but is also accountable for the lower than average farm gate price received by members, who are required to forfeit 1p per litre as security against the loan. For farms operating at lower yields or located in more remote areas, First Milk offers the best option.[cxli] However, for larger more centrally located farms, and indeed younger farmers, such forfeits generate a considerable perceived loss of income.[cxlii]

Finally, the position of the cooperative is made more difficult in that they have shouldered, as had the MMB's and Milk Marque before them, the cost of reducing the cost of procurement of both materials and skills for First Milk members.[73] Yet the cause of the problem in terms of the value generated from such investments cannot be attributed to these factors alone. Rather, in market structures where the buyers' market is not highly

[73] In order to promote best practices First Milk established First Direct, which offers members preferential rates through collective acquisition, and the Academy, which is the educational or knowledge transfer unit.

concentrated and contested and where milk is not used as a loss leader, these measures could prove successful and improve the benefits delivered to members.

8.2.2 First Milk and its value as a counterbalance to vertical competition, increasing motivational interest

It might be anticipated that, if the cooperative could successfully either increase the motivational interest of buyers or even reduce marginal costs, benefits to members would improve. Investment in the creameries was certainly in line with the "adding value" domain of government policy, in which brands were linked products to *place* as in Haverfordwest Cheese Company, the Lake District and Isle of Bute Creameries, but these endeavours have required considerable levels of investment and the cooperative is faced with heavy competition from others within the market place.

Some 50- 60% of cheese and 50% of butter is imported into the UK both from EU and from other long term trade partners such as Australia and New Zealand, with 81% of cheddar cheese imports arriving from Eire.[cxliii]

The investment into the cheese sector took place over a number of years. This was substantiated by one farmer who claimed a key part in the negotiations: *"We looked at ways of getting scale size, Axis bought the plant that has now closed down at Lampeter and Aeron valley. It was on the purchase of Aeron Valley from Milk Marque, I knew we couldn't make any money out of it in the short term, but over the longer term !!…"*

These acquisitions resulted in the attainment of both an 80% share in the McClelland businesses in Stranraer and Rothesay and a significant share of the retail own label market.[cxliv] By 2008, First Milk had increased their market share to 33% of the cheese market. [cxlv] However, despite the merger, First Milk had still little knowledge of head to head negotiation with retailers and McClelland continued to take this primary role.

First Milk directors were concerned about their lack of negotiating skills and resources and the acquisition of 20% of Dairy Crest in Haverfordwest was made also with the view to redress this deficit. First Milk formed a subsidiary company: Haverfordwest Cheese Limited, and there followed a distinct shift in strategy from simply the acquisition of interests towards sole control.

In 2004, there had been an unsuccessful attempt to exclude Lactalis, the major French Dairy company, from acquiring 20% of the Scottish cheese processing business from McClelland. This failure was at least in part can be attributed to the delays in decision-making and problems of attaining investment funds peculiar to the governance and capital structures of the cooperative. In contrast, they retained their 20% share of the Dairy Crest business when later on Dairy Farmers of Britain attempted to oust First Milk from their position in the Dairy Crest Creamery at Haverfordwest. However, in order to safeguard their position in the Haverfordwest Creamery against further threat of sale they bought out the majority share of the cheese company for the sum of £62 m in October 2006[cxlvi]. This acquisition secured both the Haverfordwest Creamery and another creamery, that of Aspratria in Cumbria, both of which are located in remote milk fields. It is worth noting that the highly dynamic nature of

the market at that point in time was a function of the increased contestation within the sector as retailers placed increased pressure on prices. The sale of creameries by Dairy Crest was an attempt to increase x-efficiencies in light of the increased penetration into the UK market of Irish cheddar from Irish demutualised cooperatives such as Kerry, amongst others.

In order to set up creameries and match the competitors' operational efficiencies, the cooperatives were required to find a considerable amount of capital. Between 2004 and 2008 investment had reached some £5.6 million, which was funded by both the Welsh assembly and bank loans of which some £2.6 million was invested in new cheese vats and buildings, with a further £3 m investment into whey processing equipment[cxlvii]. Subsequently, there was a joint venture in Westbury Dairies that was made in conjunction with Milk Link and Arla,[74] established as a means of balancing the supply of milk by producing powder and butter.

In many respects, this investment strategy seems to have been potentially more problematic than the liquid milk sector. Returns from collective investment and thus net benefits for farmers were considerably lower than for the liquid milk sector, particularly where, as in the cheddar sector, the retailer own labels dominated the market.[75cxlviii]

[74] This was originally a joint venture between the three sibling cooperatives until the demise of Dairy Farmers of Britain
[75] With Cheddar Cheese , retailer own brands hold 60% of the market in 2008

As can be seen in table 8.2, there has been a persistent decline since the AOA in both gross margins and share of retail price.[76] Since 1994, margins have been eroded by the removal of intervention prices and the more readily available and increasing number of substitutes both from traditional sources such as Eire, New Zealand and Australia, and from mainland European competitors such as Lactalis and Arla. At times farm gate prices and wholesale prices for cheese milk rose as a result of rising world dairy commodity prices. This happened in 2007[cxlix] and again in the first half of 2010, but is not anticipated that this will be a longer term trend, not least because of both the high level of investment in processing plants and the period of time it takes to produce cheese.[77] It takes at least 2 years to produce mature cheddar.

In poaching First Milk farmers, dairy companies such as Arla and Lactalis have left First Milk with a high proportion of members located in remoter areas, from whom the costs of collection are higher than average. In the effort to reduce transport cost the cooperative has been forced to invest in creameries located near the milk fields.

The need to reduce transport costs has resulted in the introduction of *milk swaps* and joint transport ventures with Dairy Farmers of Britain, which took place in 2003, and these measures have resulted in savings of between £5-8 Million a year.[cl] Nonetheless, these measures have failed to stem the increasing costs of collection, which are rising in line with fuel costs.

[76] These are calculated on the basis of cost of purchase minus the costs of sales, and therefore do take account of the fact that 10 litres of milk will generate 1 kilo of cheese but do not take account of processing costs.
[77] since it takes 10 litres of milk to produce 1 kilo of cheese that must then mature for 12 months to 3 years.

In the effort to further cut costs of transportation, First Milk were encouraged to offer price incentives to First Milk farmers to switch from liquid milk to compositional milk contracts.[78] This strategy was particularly important in areas remote from centres of population.

The switch to compositional milk contracts brought a potential for higher payments per litre, but has implications for farmers in terms of the cost of production where higher protein content is required for cheese production. One farmer, despite difficulties in achieving requisite protein levels in compositional supply due to land fertility and the cost of feed compound, has none the less found that compositional delivers a safer return because of the more stringent criteria for cell counts and biocounts[79] for liquid milk. As he says:

"And just recently we were offered the choice as to whether we wanted to stay on compositional contract or opt for liquid milk contract- the price difference is marginal. We are just over protein level 3.3. 3.32 so it is definitely border line in terms of their contracts – we have been offered the choice and we chose to stay on the compositional and the reason in that is because the hygiene requirements are higher on liquid milk" (Whitland farmer)

As a means of improving their leverage position against the retail sector, First Milk has sought to develop more branded products. This would appear to have improved their position, in that there is a price differential of around £2000 a tonne, as where retailer own brand generates £1000 per tonne, the price per tonne for branded can be in the region of £3000[cli]. First Milk launched 3 regional cheeses produced entirely from milk from the region under which they are labelled. The brands are denoted as Lakeland (Aspratria

[78] This is milk with a higher protein level than liquid milk, a requisite for cheese production
[79] Measures of hygiene and animal health

creamery) Pembrokeshire (Haverfordwest) and Isle of Bute and the cooperative has also introduced a line of organic cheeses, again regionally identified.[clii]

In part, this has proved successful. The regional range is now supplied to Tesco, Asda and Morrison's. In 2007, First Milk held a 20-33% share of the UK cheddar market, largely because they inherited the key customers from Dairy Crest; they supplied all Asda's own brand cheddar. In the first instance, this offered the cooperative a certain degree of leverage, but ease of switching by retailers due to the ready substitutability of even branded cheddar means that any period over which they are able to increase prices has been short lived.

This was apparent from the price drop they experienced when they attempted to renegotiate their 2007 price with Asda. In 2007, First Milk had control of Asda's own brand cheddar cheese and extended their offering to include their own regional cheeses, the combination of which offered them the opportunity to instigate a £400 price hike per tonne. A year later, in July 2008, the price received per tonne rose by a further £300.[cliii]

However, on the renegotiation of the contract in January 2009, 8000 tonnes of Asda branded smart price mild cheddars were switched to their major competitor Lactalis.[cliv] First Milk remains a major supplier of cheese and continues to supply their regional cheeses to Asda and Morrison's, but has now reverted to its previous leverage position.

As a result First Milk prices for compositional milk are lower than those of its major competitors[clv]. This can be predominantly attributed to two key factors:[80] the lack of real differentiation between branded cheddars, and the high costs of investment in the facilities. It is apparent that branded products offer little perceived product differentiation. As a manufactured product rather than handmade cheddar, the branded cheese, remains easily substitutable and is unlikely in the future to increase the motivational interest of its buyers.

Even though the brands have been given a clear regional identity, and retailers including Asda have ostensibly supported the local food agenda, in reality these local cheeses are made under factory conditions and are easily substituted in the minds of the consumer with brands such as Seriously Strong Cheddar (Lactalis) and Pilgrims Choice (Dairy Crest). Alternatively, with some 243 million litres of milk to put into cheese production, any attempt to enter the niche market of handmade cheeses might prove to be problematic.

[80] Notwithstanding the earlier points made regarding the higher marginal costs of coalition given the role of the cooperative as balancing agents and costs to the cooperative such as seasonal adjustment payments, etc. And the additional costs of knowledge transfer and member support.

Figure 8.2 comparison of retail, wholesale and farm gate prices and margins for standard mild cheddar

	1995			1996			1999			2006			2009		
	ppl	margin	% ppl	ppl	margin	ppl %	Ppl	margin	ppl%	ppl	Margin	ppl%	ppl	margin	ppl%
Farm gate price	24.5		69	22.0		59	25.8		47.2	18		48	23.8		42.9
processor price	27.9			25			29.0			20.9			27		
processor margin	3.4	12.2%	9.5	3.0	12%	8	3.2	11%	5.9	2.9	14%	7.75	3.2	12%	5.7
retailer price	35.5			37.1			54.7			37.4			55.4		
retailer margin	7.9	22.25 %	22.25	12.1	33%	33%	25.7	47%	47	16.5	44%	44	28	51%	51

8.2.3 Longevity and cohesion-the costs of coalition

First Milk, as previously indicated, faces problems of the cost of coalition. Classically, the traditional cooperative faces all the problems of financial gearing associated with governance structures. First Milk has established new creameries on the Isle of Bute and at Haverfordwest; they have had the classic difficulties in raising capital. This is because they have not as yet established B shares or other forms of external funding and are reliant on bank loans, for which they have raised the collateral from the retention of a proportion of the milk price. Many farmers have criticised this strategy and hold that the retention of money for collateral reduces the net benefit, to invest in businesses which are of little value.

"So I didn't feel that we were part of it, they were taking money off us and giving us totally worthless share options" ..... (Thomas)

As noted earlier, members receive on average 2p a litre less than their counterparts who supply direct to Wiseman. During the period of acquisition of Wisemans, this differential could be partially accounted for by the requirement of members to contribute 1.5p of their farm gate price for a period of 5 years, in order to raise collateral of around £28 million.[cxi] As the result of Welsh Assembly funding there has been notably lower requirement from members for the acquisition of Dairy Crest, and the new cheese brands and money retained by the cooperative from milk cheques at the time of the research amounted to 1p per litre.[cxii]

Prices do remain relatively low, however, in comparison to competitors; and as a consequence members perceive that there is an unfair burden of costs, particularly if they

produce milk for the liquid market. This differentiation between compositional milk and liquid milk appears to have materialised at the same time as the shift from rail transportation of milk to carriage by road and the move towards “every other day” collection.

The reasons for differentiation are related to the protein content needed for cheese production. While cows’ milk tends towards a protein level of around 3 grams per litre, this deteriorates over quite short periods of time, despite refrigeration. This means higher initial average levels of protein need to be present in the milk in order to have the minimal milk protein levels for the cheese market. This is particularly so where there can be a delay of 3-4 days between milk production and its delivery to the cheese factory. In order to achieve higher protein levels farmers often need to seek specialised feed compositions and thereby incur higher on-farm costs, the extent of which vary according to the soil and geology and topographical structure of their land.

As previously stated, with the higher proportion of remoter farms, the cooperative needs to diversify into cheese production in order to reduce the costs of transporting milk, but the act of diversifying into an added value activity that adds no real value increased both the costs to those farmers on compositional contracts and the perception of uneven and unfair burden of costs between members. The contractual terms given to farmers make them acutely aware of the destination of their milk, and means that farmers resent a reduction in milk price where the investment it serves is not to their direct benefit.

Where members are able, they are leaving the cooperative. Dairy companies continue to poach farmers through higher milk prices. It thus can be said that the differentiation of milk coupled with high transport costs increases the problem of member defection, and this further undermines the financial security of the cooperative, with the net result of further member defection. Eric Evans, a young although a relatively small farmer, for example, was approached by Dansco: *"I left Milk Marque/First Milk in April 1999, because one of the instigations was the seasonal adjustments to price, the seasonal adjustments were a killer, and once I left First Milk I was £14 000 better off. They were offering 0% interest free loan for up to 75% of the milk cheque, it helped me pay for the bore hole, and Dansco paid the fine to leave First Milk"*

Liquid milk farmers have been continuously incentivised to leave the cooperatives. Farmers located close to and supplying Wisemans, for instance, find that they receive between 2p and 6p more per litre than First Milk farmers who supply the same dairy. Poaching not only affects the liquid milk farming business and now there is an increasing trend by the creameries to poach farmers who supply compositional milk. Prices have declined accordingly for remaining members. Lactalis, joint owners with First Milk of McClelland cheese, are offering Scottish farmers an average of 1p more than the First Milk at the time of writing, and, as serious competitors for the cheese processing sector, with key brands such as the President brand and Seriously Strong Cheddar, this action not only undermines their position with regard to costs of production and financial leverage, but also their ability to sustain their core business with the major retailers.[cxiii]

With a bank loan of £80 million, high financial leverage contributed considerably to the financial loss of almost £10 million suffered by First Milk in 2009/10. Their financial position was also threatened by the demise of Dairy Farmers of Britain, with the loss of both their milk swap and haulage arrangements increasing their operating costs.[55]

Unlike their sister cooperative Dairy Farmers of Britain they continued to trade, despite the net loss of over 100 members[56]. As a means of stemming member exits and increasing the price paid to farmers, First Milk sold 5.7% (4,170171 shares) of their stake in Robert Wiseman for a sum of £18,765,769[cxiv]. With further savings made on haulage, salaries and administration, by March 2010, the company again traded at a profit (£360,000) and reduced its borrowing by over £10 million. This was despite the loss of total turnover by some 8% on loss of their Tesco retail own branded cheese contract to Kerry.[cxv]

8.2.4 The distribution of costs between members and the non-excludability of benefits

It may still be argued, however, that the future sustainability of First Milk is in question. Because of the continued investment by competitors within the sector, while they fight to maintain the limited numbers of buyers available, it is problematic whether their efforts can effectively generate sufficient net benefits to accommodate all but the less efficient, more remote, albeit more loyal farmers.

[55] Operating costs are subtracted from the price per litre paid by the buyers, prior to the determination of milk price for members and therefore are not recognised by members.

[56] The net loss hides a much greater movement of members, with the failure of Dairy Farmers of Britain in November 2009; First Milk acquired many of their members, so that the loss in terms of the total membership, of 100, undoubtedly represents a much larger movement.

Nevertheless, it is apparent that they serve a useful function within the Dairy sector. It has been recognised for some time that the pressure of cooperatives within the dairy sector increases prices for the sector as a whole. There is substantive evidence that in the absence of cooperative activity farmers are more prone to post contractual hazards. Furthermore, First Milk actions in 2007 and 2008, with regard to the price per litre for compositional milk have resulted in a critical price hike across the sector. Where in 2007 they raised their average price per litre by 0.45 ppl, these hikes had a similar impact on prices paid by their major competitors.[cxvi] Dairy Crest raised prices by 2p amount over the same period.

But it does not appear to be a position in which they can be complacent. Subsequent events would suggest that their presence in the market can have a negative as well as a positive impact on British Milk prices. In January 2009, prices were cut by First Milk by 1.25p per litre, which was held to be a consequence of the fall in the price of milk across Europe.[cxvii] Subsequent drops in price were announced by Arla of 2ppl, Dairy Crest of 1.75p per litre and Wisemans of 2.2ppl.[cxviii] In this instance it is claimed that these were the effects of the reduction of world prices on the prices of European Milk, but it highlights how a drop in milk price by First Milk is swiftly copied by non-cooperative firms. This pattern, where non-cooperative firms replicate the price drops of First Milk, has been repeated over time, with similar events taking place in April 2010[cxix], and while it might be assumed that the pressure to drop prices is of equal intensity upon all parties, it is apparent that non-cooperative firms allow First Milk to take the lead.

If these patterns are considered in the light of the cost of coalition, it is apparent that with high dedicated investments, loss of membership and a greater burden of costs on remaining members, there is considerable danger of a negative yardstick effect. Over the longer term, as the cost of coalition increases due to the rise in transportation costs and the decline of the sector as a whole, with consequent low returns to farmers and a declining number of processing plants, it is doubtful whether the cooperative can continue to survive.

8.3 Lessons learnt

The examination of cooperative action within the dairy sector suggests that here again the cooperative has failed to deliver benefits to its members. The exploratory framework held that cooperatives are unlikely to survive where benefits are not created, either through increasing either scarcity or utility, and where cooperatives are not cohesive. This case study suggests that while at the present time the cooperative survives, it fails to deliver increased margins and farm gate prices. This is despite proactive forward investment in the high value of liquid milk and in the cheese processing sector.

8.3.1 Creation of leverage through absolute/relative scarcity and/or motivational interest.

These findings suggest that unless cooperatives generate benefits through either scarcity or increased motivational interest of buyers they are unlikely to succeed over the longer term. While the Milk Marketing Board was able to successfully create absolute scarcity and thus fix prices, prior to the Uruguay round of Agricultural Agreements, First Milk has been

unable to replicate this position. This is because of the highly competitive final product market. This case offers an insight into an interesting limitation of the conceptual framework and places a question mark over the ability of cooperatives to create absolute scarcity in heavily contested market places. First Milk, following in the footsteps of Milk Marque, introduced measures to forward integrate and these again have not yielded the benefits anticipated. It is apparent that they are not unique, in that the other two sibling cooperatives, Milk Link and Dairy Farmers of Britain, have experienced similar difficulties, which is clearly a function of the emergence of multiple retailers and the transformation in the distribution of power between the dairies and retailers following the decline in share of the liquid milk of doorstep deliveries.

8.3.2 The longevity and cohesion of the cooperative

The case study shows that the longevity of the coalition is reduced as the perceived costs rise, which according to the exploratory framework would suggest that the cooperative may be unstable. In this case study high marginal costs in the form of dedicated investments have materialised as a consequence of the need to address the inability of the cooperative to deliver benefits to farmers. Indeed, there are parallels to the position of Milk Marque: prior to their actions that led to the OFT report. In both instances members have experienced cost increases as a result of allocative and x-inefficiencies because of dedicated investments.

This is a consequence of the need for investment across dairy sectors, in particular the investment costs in cheese processing. These are high because the majority of members are

located in areas which are remote to centres of population and the liquid dairies. The heavy costs of transportation make this option the most desirable, despite the proliferation of cheddar cheese producers worldwide and the ability of retailers to easily switch suppliers. In the second instance, the poaching of more accessible farmers by competitors has resulted in x-inefficiencies which have increased in line with the marginal cost of collecting. In effect, these events suggest that people are behaving with calculative rationality, switching buyers where perceived costs exceed benefits.

8.3.3 Problems of non- excludability

This case study shows that as a consequence of the heterogeneity of interests of members the cohesion of the cooperative has been threatened by the predatory behaviour of alternative milk buyers. This was made possible because of the perception by certain farmers that they were bearing a disproportionate share of costs. Farmers selected by the dairies for direct supply are/were enticed through higher farm gate prices, the costs of which were offset against lower collection costs. Over the longer term, the uneven burden borne by First Milk as a consequence of the actions of the Dairy companies has resulted in the reduction of the price paid to First Milk members. Price reductions experienced by First Milk members have swiftly led to a price cut for farmers supplying non-cooperative alternative buyers. However, it is also apparent that without the presence of the cooperative, prices for dairy farmers might be even lower. If the conditions faced by farmers prior to the establishment of the Milk Marketing Boards in a less consolidated market is any indicator, the high perishability and

continuous harvesting of liquid milk makes dairy farmers particularly vulnerable to moral hazard.

8.4 Conclusion

As in the previous case study, this case study suggests that the continued presence of the cooperative is not necessarily a function of its ability to generate improved farm gate prices or margins. However, in this case its continued existence appears under greater threat.

This case study was selected with a view that a large cooperative might prove to be an effective balancing mechanism through the creation of relative scarcity. Contrary to expectations, First Milk was able neither to improve leverage through controlling the milk supply nor to differentiate its product. This suggests that in highly contested markets where retailers are able easily to switch suppliers and where the product holds little operational and commercial importance to the retailer, a cooperative firm is unable to lever greater value. The findings also suggest, as anticipated, that as a large multiproduct cooperative, the cooperative did experience a loss of cohesion and member defection. This was, however, largely a consequence of the predatory behaviour of competitors.

In this case, the defection of members has brought about higher marginal costs for the remaining members as x-inefficiencies have increased. This increase in marginal costs for members has led to costs being in excess of benefits received. With few alternative buyers for these members the cooperative continues to survive.

Attempts to address this problem have led to high investment in cheese processing, within three key remote member locations. This has further increased the marginal costs of the cooperative for its members, besides presenting the cooperative as a firm with significant levels of financial gearing. Ironically, if one looks at the failure of Dairy Farmers of Britain, the sister company of First Milk, it was the excessive financial leverage rather than the loss of benefits that caused their failure.

CHAPTER 9

CASE STUDY 3 – YORKSHIRE FARMERS LIVESTOCK MARKETING LTD

9.0 Introduction

The focus of this next case study is Yorkshire Farmers Livestock Marketing Ltd, one of around 5 cooperatives in the UK who operate in the Pork sector. Established in 1932 as a bargaining association, it acquired bacon production facilities in 1934. As in the examination of both the topfruit cooperative SGT in chapter 7, and First Milk in chapter 8, this case is used to explore the value of the cooperative as a mechanism to improve the profitability of pig farmers in a marketing channel where the majority of sales are to the highly concentrated retail sector.

In recent years there has been a notable decline in the number of UK pig farmers and despite the increased consumer demand for pork it is evident that prices paid to all parties throughout the UK pork supply chain have fallen.[57] This trend may be attributed to the increased leverage of multiple retailers and the pressures they have placed on abattoirs to cut prices. As a consequence, abattoirs have sought to substitute the UK supply for lower cost EU pork. Yorkshire Farmers Livestock Marketing Ltd still supplies Vion and Tulip in the

[57] These are demonstrated as oscillations in farm gate prices which are a result of the lag between price signals to farmers and the time when the product becomes available to market.

UK but the volume supplied is but a small proportion of the business of the two largest UK players in the abattoir and meat processing sector.

None the less, the cooperative has an influence over the weekly pig prices. Weekly fluctuations in numbers of marketable pigs, a notable characteristic of the pig industry, mean that in any one week abattoirs risk a shortfall in supply from contracted farmers. YFLM has the capacity to redress any shortfall and is therefore is able to negotiate above normal prices for members. In addition, YFLM members largely find that the costs incurred to operate the cooperative are lower than alternatives. This is despite considerable investment in additional revenue generating activities. Findings suggest that members perceive that the cost of coalition is low because of the range of services offered to members, tailored to individual member needs. Marketers at YFLM attain an in-depth knowledge of the pig farmer's business, his stock and production methods and are able to offer both a sales and advice service that best fits their needs. The value of YFLM to farmers is in its ability to significantly reduce on-farm costs and risks, including the costs of monitoring the market, short-term contracts, indemnity against non-payment, and the advisory service on herd health. Nevertheless, members are still at risk, as a consequence of the pressure on prices by downstream parties, as the price they receive per kilo of pork is often lower than their on-farm operating costs.

9.1. The historical background to the pork supply chains, collective action within the UK, and underlying EU influences on the competitiveness of the sector

This case study examines the success of Yorkshire Farmers Livestock Marketing Ltd, a small to medium sized pig cooperative that was originally established as a cooperative in 1932. [cxx] The cooperative was set up to maintain prices, to reduce the price oscillations peculiar to pig production[58] and to protect the sector against the increase of cheaper imports[cxxi].

9.1.1 The historical structure and characteristics of the pig sector

The pig meat supply chain consists of producers, pig marketers who supply either auction houses, agents, abattoirs, or vertically integrated abattoirs, processors, and specialist manufacturers who sell directly to the retailer/caterer. Carcasses are broken down into prime cuts, like steaks, which are sold predominantly to retailers, and cheaper cuts, usually sold to food manufacturers or exported. Farmers will, depending on the nature of their farm, select to produce either light weight pork pigs that will be ready for market in 4 months or heavy pigs, bacon pigs, which may take around 30 days more to reach the market weight of up to 95 kilos dead weight. Mature sows can produce 2-3 litters a year, and may produce up to around 12 piglets every 140 days. However, it takes 12-15 months for a gilt, a young female pig, to reach maturity. It is this biological lifecycle that is generally seen to be at the root of the price oscillations; the "cobweb effect", within this sector. It describes an effect during

[58] This is known as the cobweb effect.

which there are two years of rising prices, followed by two years of decline. [cxxii] The cycle is generally attributed to the biological processes and the lag between the farmer's decision to change production and the point where the commodity is available for consumption. The explanation of this cycle is that investment in pig stock and production will take place when prices are high, which inflates production over a two year period. Once production exceeds demand, then there follows two years of declining prices and farmers exit the market. As pig stock levels decline, prices will recover to their original position. These self-perpetuating cycles of pig prices were for a long time seen to be both the cause and the consequence of the inefficiencies and non-competitiveness of the British pig industry. Other factors, such as farm practices [59] and husbandry systems,[60] genetics and feeding systems,[61] were considered to be uncompetitive and it was in this context that the UK government made steps towards the redevelopment of the sector and YFLM was formed.

It was evident as early as 1932 that more efficient methods of production in mainland Europe were undercutting the prices, at which stage the British government brought in legislation, **British Agricultural Policy 267,** to redress this problem[cxxiii]. This led, in 1933, to the inauguration of a marketing scheme for bacon pigs that was designed to promote UK production of bacon. At the time UK fresh pork producers were already protected by a sanitary embargo on imports.[cxxiv]

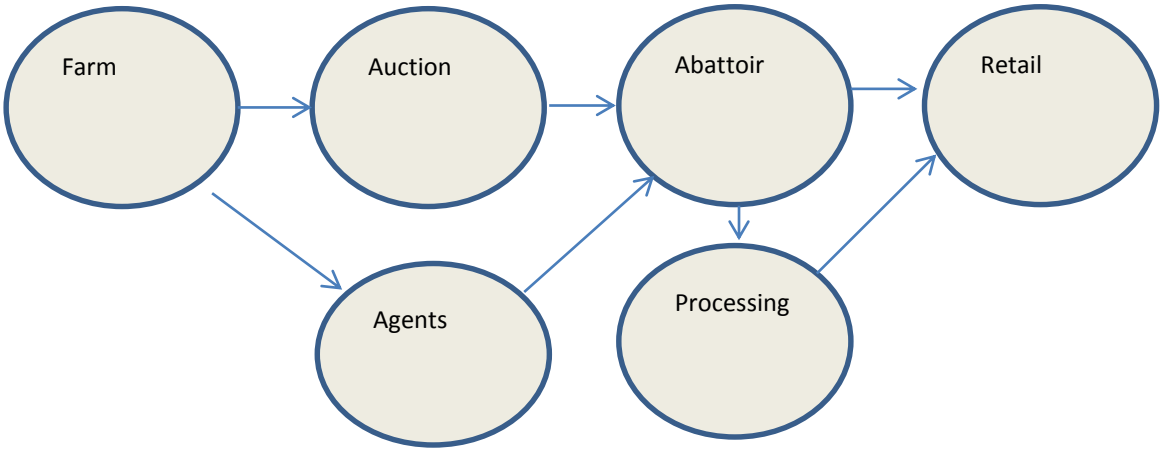
[59] Types of pig farms. Pig farms can be classified into three broad types which can be subdivided into those farms that solely produce weaners, those farmers who finish pigs and those who undertake the whole process,

a. Outdoor breeding selling,
b. Indoor breeding selling
c. Mixed indoor and outdoor breeding:

[60] These are distinguishable according to housing, i.e. housed indoors on slats, housed indoors on straw , between which there is a variation in terms of both the cost of the straw and the time taken in cleaning out the areas, and outdoor reared pigs, which are slower growing and require more feed to reach required weights

[61] There are two key feeding methods, which have different cost implications. Wet systems have higher set up costs but savings are made on the cost of feed, while dry feed systems are a mixture of cereals, proteins, vitamins and molasses, which have minimal set up costs but cost more to procure.

Figure 9.1.: Simple supply chain for Pork



In the 1930s the pig sector was highly fragmented in all stages of the marketing channel from farm to plate. Meat was predominantly purchased by the consumer from butchers, who sourced from and often owned the local abattoir.[62] Pork was largely purchased at livestock auctions, although it should be noted that around 12% was contracted either through agents or direct from farmers. Livestock that was not sold locally was predominantly transported by rail.[cxxv] One of the key objectives of the 1933 policy was to establish quota restrictions by the development of a system of contracts between pig producers and curers. In these contracts curers were required to pay a fixed price in order to give a "small profit to producers over the actual cost of production"[cxxvi] and it was in this context that YFLM were formed.

Some consolidation had taken place in the butchery sector prior to the establishment of YFLM. Notable names like Dewhurst, Vestey, Matthew Meats were established in the early

[62] A practice that continued until the 2nd world war, when the ministry of war took over the management of stocks and supply

1900s. Even so, these larger butchers were but a small fraction of the total number of butchers and there were probably over 150 000 separate business entities within the UK at that time.[63] The supply chain during these years had a further advantage over current markets in that all parts of the pig had an economic value and included not only choice cuts such as pork loin but also pig's trotters and chaps and other such delicacies. Current difficulties in generating economic benefit, particularly within the UK, have been associated with "carcass balance", a term used to denote the proportion of usable cuts.

By 1934, the members, who had initially benefited from collective bargaining power and the influence of YFLM over the fixed price, had gained a further advantage by the acquisition of a processing plant for the production of bacon. In addition, the cooperative had the option of supplying lightweight pigs direct to the relatively fragmented butchery sector.[cxxvii] While documental evidence is limited on the number of the pig cooperatives at the time, it is possible that YFLM held around 5% of market share.[cxxviii]. What is clear is that when YFLM was first established, they were one of few parties supplying deadweight pigs under contract.

YFLM presented their members with a number of advantages both in the marketing of fatstock and in the encouragement of more market orientated pig production. The cooperative also offered members economies of scale through joint use of equipment, breeding stock and marketing as well as the ability to increase the level of relative scarcity of both pork and bacon. As one of the cooperatives that arose as a result of the British

[63] The precise number of butchers was not specifically recorded until the commencement of their decline in the 1980s but with 143 900 retail outlets, which include all food and beverage retailers with the exception of grocers, it is probable that there were over 30 000 butchery outlets, of which around 1/3 were part of multiple operations.

Agricultural Marketing Acts of 1931 and 1933, YFLM was in place at the time when efforts were being made to control the impact on domestic cured pork prices of the increasing volumes of imports from, in particular, Denmark[cxxix]. The bacon restriction scheme inhibited imports and by 1934 the volume imported had declined by circa 50% to 6.3 million CWT. These measures increased self-sufficiency in pork meat to 78% of consumption and 29% in bacon, which represented a 100% increase on 1927 figures.[cxxx]

Encouraged by the quota restrictions, which limited the permitted imports, YFLM acquired slaughtering and bacon processing facilities in Malton, North Yorkshire as a way to reduce the perceived risk experienced by farmers from opportunistic behaviour by selling under contract. The British government had attempted to restrict opportunistic behaviour and protect farmers through the introduction of fixed farm gate prices under the Pig Marketing scheme. Their particular concerns were that there were wide variations in the price paid under contract by abattoirs due to variations in kill out weights.[64] The cooperative undertook to protect farmers, but farmers had an innate distrust of wholesalers and processors, doubting their willingness to deal fairly and honestly with the farming community.[cxxxi] These contracts had a further advantage in that they encouraged farmers to extend the period of production in an era prior to refrigeration. YFLM owned the slaughter house and bacon factory until well into the early 1970s.[cxxxii] As a YFLM marketer recalls:

[64] This refers to the weight of the pig once slaughtered and gutted and it had been found that the kill out weight could range between 60-75% of their registered live weight.

"Historically Yorkshire farmers owned Malton's bacon company, There is a picture in Grampian office in Malton, a picture of the building in 1942, 1972, and on the top of this building written in white is Yorkshire farmers", (YFLM Marketer)

9.1.2 Horizontal competition, EU membership and market liberalisation

The measures introduced by the UK government resulted in greater self-sufficiency in both pork and bacon, but in the longer term this position did not prove to be sustainable. Three factors altered this position. Firstly, Britain's entry to the common market presented the cooperative with increased horizontal competition, as guaranteed pricing systems under fixed price regimes, import embargos and import tariffs on all pork products were lifted.[cxxxiii] Secondly, following the Uruguay agreement, the UK pig sector faced heightened competition from Europe, as international markets became less available as a consequence of the requirement by GATT to cut EU exports. The Uruguay agreement held that the EU should cut export subsidies by 36% of the 1988-1990 average for developed countries, with a corresponding reduction of import levies of 36%. By 1998[cxxxiv], UK self-sufficiency in pork had decreased from 99% to 84%, with a corresponding decrease from 43%-40% in bacon, and with an average decline across the two categories from 98% in 1975 to current figures of around 50%.[cxxxv]

The third event was a consequence of more stringent welfare legislation governing the UK pig sector, which deepened the cost differential between UK and, in particular, Danish pig production. Coupled with the greater efficiency of, for instance, Danish slaughter operations and processors, built up under a cooperative structure in a position of oligopolistic and oligopsonic power, the UK sector was unable to effectively compete. By 1992 outputs were

10 times greater than their UK equivalents, where the average annual output in Britain was 22 000 heads per annum against 250 000-500 000 in Denmark. This had been achieved through heavy investment in Danish large scale integrated facilities.[cxxxvi]

Similarly, comparative on-farm costs in the UK were some 30% [cxxxvii] higher than their EU counterparts, with feed conversion to meat rates around 3.6:1 at that time. The British pork industry required a considerable amount of investment both on-farm and in processing to compete. In an attempt to redress their position, the UK processors experienced another wave of consolidation. It was at this time the Malton bacon factory was acquired, probably first by Bowes, but certainly by Unigate in the mid-1970s. More generally across the UK, the numbers of specialist abattoirs had fallen from 808 in 1982 to 576 in 1992, and by 1993 five key companies held circa 70% of the market[cxxxviii].

Consolidation did not, however, stem the threat from Europe and the increase in imports from, in particular, Danish bacon continued to increase. Danish bacon, by this stage, held around a quarter of the UK market. Not only were the key players in the processing sector more efficient than their UK counterparts, but EU farmers were also able to operate under lower cost parameters than farmers in the UK. The introduction of EU welfare legislation in 1999 in the UK, well before the 2013 deadline presented under the legislative framework, significantly undermined the competitiveness of the sector. Under the terms of directive 91/630/ec, all tethering of sows and gilts was to cease and they were to be allowed to live in small groups. This move required considerable investment in pig accommodation. This was reflected in a statement made in an interview with a leading pig farmer:

"*In 1997 – prices rocketed but production of pigs did not expand greatly at all. But then we had the stall holding ban which came in 1998 –and people had to spend money to convert and then there was quite few years of productive loss until people got used to the concept. ---- Prices collapsed in the back end of 1998 due to the increase in production in Europe and ….because of how cheaply the European pigs could be produced at a lower cost of production by using bone meal, small stalls and all this sort of jazz".*

At the same time, the UK government implemented the Pig Industry Restructuring Scheme (PIRS), a plan designed to improve efficiencies. The implementation of the PIRS was designed specifically to facilitate the exit of less efficient farmers from the sector. The net effect of these two pieces of legislation was to inflate the costs of production to UK farmers, further undermining the competitive position of UK farmers against their European counterparts.[65][cxxxix] The impact on the UK sector of these measures took place despite the introduction of safeguards that were designed to ensure that all meat sold into the UK was produced to the same welfare standard.[cxl]

This position should, however, be redressed by 2013, when all other EU farmers are required to conform to the same standards, but the early introduction had a major impact on the sustainability of this sector and herd and sow numbers continued to fall.[cxli] Notably, between 2001 and 2007 herd numbers declined from 598 000 to 436 000[66]. [cxlii] [cxliii] This would appear to have a major impact on the ability of the cooperative to sustain membership, as smaller pig farmers left the sector and larger farmers are increasingly supplying direct to processing companies. However, whilst horizontal competition destabilised the position of

[65] The PIRS included two components: a pig outgoers scheme and a pig ongoers scheme. The outgoers scheme sought to reduce production capacity through the removal of less efficient producers, and improve core efficiency, whilst the ongoers scheme was intended to assist producers, and encourage larger holdings to take advantage of funding opportunities.

[66] This corresponds to a decline in the volume of production of around 50% over the same period, from 1,155 million tonnes to 0.739 tonnes in 2007

the UK producers, changes to the structure of supply to the retailers had the most significant impact on the ability of YFLM to ensure benefits to members.

9.2 Retailer consolidation and post 1999 welfare legislation

This section examines the period post retail consolidation with the view to understanding whether the cooperative can increase leverage in current market structures and whether members can attain a greater share of the surplus through cooperative action. Section 9.2.1 explores how the distinct qualities of pork makes pig farmers particularly prone to moral hazard. This case study shows that the cooperative has done much to alleviate risk, but shows that the cooperative has failed to create relative scarcity or increase motivational interest over the longer term. This issue is explored in more depth in 9.2.2, 9.2.3 and 9.2.4, where it becomes apparent that the cooperative supplies a key service to smaller farmers and will continue to operate as a cooperative as long as such small farmers remain in the sector.

9.2.1 Retail consolidation and the cooperative as a counterbalance – increasing relative scarcity

As examined in section 9.1 of this chapter, the British consumer began to switch from traditional butchers to multiple retailers, although this was relatively slow in comparison to other product categories. By the 1990s, multiple retailers had only increased their share of market from 3% in 1963, to 44%, but by 2008, the top four retailers held 75% of the market share of all pork produce. Already threatened by horizontal competition, the pork marketers in general and specifically YFLM were faced with fewer alternative buyers for their produce.

Having already disbanded activity in slaughtering and bacon curing in the 1970s, they were predominantly supplying the retailers through abattoirs, who had latterly integrated vertically with the processing sector, a position which made it more difficult to increase relative scarcity.[cxliv]

The dominance of the multiple retailers in sales of pork hastened a further consolidation of the abattoir and abattoir/ processing sectors. The consolidation of the sector was dramatic. By 2003, 21% of abattoirs were controlling 80% of the market, 75% of which was in the hands of 5 major players: Bowes, Cranswick, Geo Adams, Grampian Foods and Flagship Foods. In an attempt to increase their cost efficiencies, abattoirs/processors[67] consolidated their activities into fewer units. Between1990-2003 there had been a 69% decline in abattoir numbers, from 1000 to 314. Further consolidation was to follow and[cxlv] by 2009 70% of the market was held by two major companies, both European owned: Vion and Tulip. As a YFLM marketer commented: *"Tulip has 4 abattoirs ……they have 35% of the kill, whilst Grampian, which has now been taken over by the Dutch company Vion, the merger will take place in 4 weeks, they will have roughly the same amount of the market" (YFLM marketer, August 2008)*

As well as being driven by retailer power, the consolidation has also been a consequence of the measures implemented under the 1995 food safety legislation.[cxlvi] Multiple retailers have

[67] This makes reference to the emergence of fully integrated abattoirs and processing

sought to reduce their supply base and more closely regulate the slaughtering sector. This has had the net effect of significantly altering the structure of the supply chain, an event that has had an even greater impact on the balance of power within the supply chain.

In terms of the details of the consolidation, by 2009 the two key UK pork suppliers, Vion and Tulip, had acquired much of the competition. Tulip, the UK commercial subsidiary of Danish Crown, after a train of acquisitions, acquired Flagship Foods, who owned processing operations in the guise of Dalehead Foods and Roach Foods as well as the pig farming operation British Quality Pigs (BQP). This acquisition was designed to strengthen the leverage position of Danish Crown against the retail sector. Not only did the acquisition increase their market share of the abattoir and processing sector and enable, through restructuring, increased efficiency of production within the group, but it also gave the group a contract with Waitrose. BQP supplies Waitrose with 80% of their pork, a figure which represents an 8% share of the retail market.[cxlvii] Vion, a Dutch company, followed suit with the acquisition of Grampian Country Foods, and similarly not only consolidated its position within abattoirs and processing but acquired albeit a relatively insignificant upstream operation in pig farms and feed mills.[68][cxlviii]

The other two key players, Cranswick and Woodheads (wholly owned by Morrison's), have predominantly consolidated their position to the expansion of their processing capacity[cxlix].

[68] It is perhaps worth noting that at the time of corrections Vion had abandoned the UK market because they were unable to generate sufficient margins

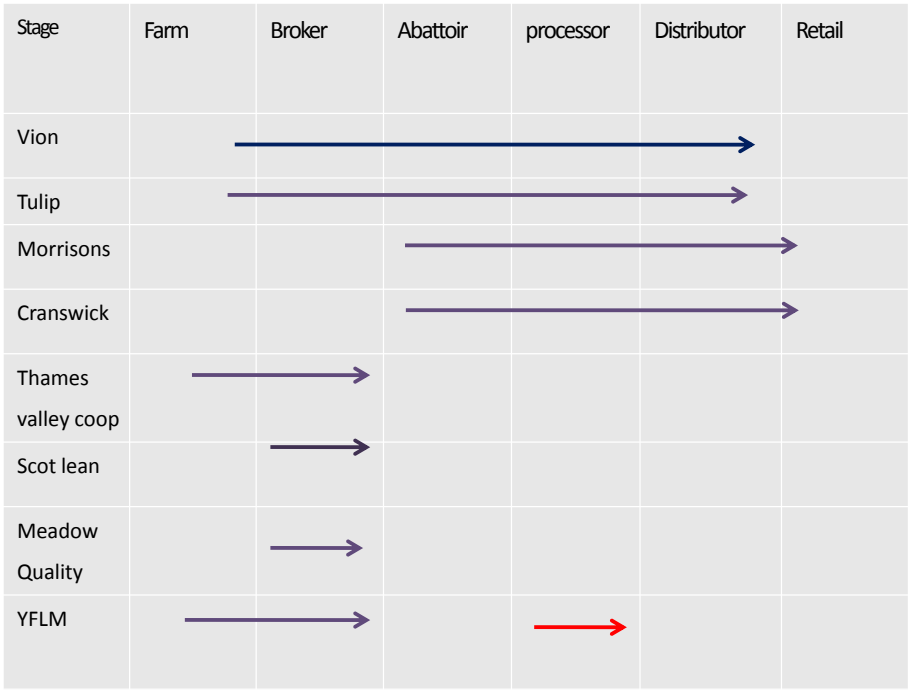


Figure 9.2 Extent of vertical integration in the Pig supply chain (adapted from EFFP, 2009)

In selecting an almost fully integrated supply system Vion and Tulip are able to reduce the costs and risks of supply. Tulip, in bypassing the marketing agents, will have saved between 30-40 pence per pig in marketing fees, although in real terms savings would be limited as for the most part they operate under direct contract with farmers. In acquiring Flagship, which included Dalehead Foods, Tulip has in effect bought out the bespoke pork market in terms of genetics and husbandry, [69] for which farmers receive a premium. [cl] Arguably this contract could place either the retailer or the supplier at risk of moral hazard; however, there is insufficient information forthcoming to make a clear evaluation.[cli] However, farmers see the supply to specific contracts as of value to their business, as indicated by one reputed pig farmer:

[69] Waitrose require that pigs supplied to them are PIC 337 -A specific genetic mix of pig

" Tulip supply 3500 sows through the BQP operation, and that is nearly all dedicated to Waitrose------The Waitrose model is a good model, Waitrose have their own genetic specification, the PIC 377… I am going to supply that particular supply chain to Waitrose"

There was a further advantage for these two European players, in that their entry into the UK market has offered them greater control over this relatively lucrative UK market and ensured access to pigs produced under EU welfare standards at a period of transition in Denmark. This was particularly important because of the impact of Uruguay on their export business. In essence, the decision to consolidate within the processing sector and the supply chain was an attempt to attain leverage over the multiple retailers, but even more to undermine the UK market where the Uruguay agreement placed constraints on their efforts in international markets.[clii]

Yet it must be noted that all four abattoir/ processing companies continue to purchase from YFLM, although YFLM's share of the market continues to decline. Just over 5000 pigs per week are sold by YFLM to the 4 key buyers and a total of around 3632 pigs per week are sold to the largest two operators, Vion and Tulip. This demonstrates a high degree of dependence of YFLM on these two key players, representing as they do 72% of their total supply. The remaining 28% of their weekly sales are supplied to the two key remaining parties, Woodheads and Cranswick; the latter a key supplier of Sainsbury's.[cliii]

The reduction in the numbers of abattoirs supplying the mainstream retailers has had corollary effect on the number of auction houses, who now control less than 0.5% of pig sales; a decline of 16 fold from 1990. Of the remaining abattoirs, only 5-8 operations sell

pigs as either breeding stock, weaners or for slaughter. The auction houses supply to small abattoirs and butchers.[cliv] One small Sheffield farmer who has 2 sows said:

"I take around 14 live pigs to market in my trailer. The nearest market is Selby or York, Bakewell don't do any pigs any longer. The Butchers will have a buyer (abattoir) who will be buying for them, He gets them killed. And then the butcher has his pick."

In this context, while it is unable to increase scarcity, the cooperative is still able to marginally to improve the farm gate prices and gross margin benefits. The weekly variations in the volume of production of pigs and tight but variable specifications as to probe and weight levels mean that the abattoirs are consistently faced with a potential shortfall[70]. The ability of abattoirs to draw upon YFLM for small top up volumes, when they experience a shortfall elsewhere, increases the price paid for pigs above the Deadweight Average Pig Price (DAPP). Prices for pigs are based on contractual terms, but the specific price paid depends on Deadweight Average Pig Price, a price which is calculated on the basis of the average price paid in the previous week. It is this mechanism that allows the cooperative to manipulate higher prices for their members. Many of the members are under contract to the key abattoirs, but the cooperative has a level of flexibility as it is able to offer two or more members "joint" contracts whereby if one farmer is unable to fulfil the volume the onus is placed on the other to supply the shortfall. In addition, there are the cooperative's own pigs and these equally may be deployed to fulfil the shortfall.

One pig farmers explains the arrangements: *"We are now on a bit of a coop contract with Tulip, we are on a three week batch system. We should be weaning 800 pigs every three weeks – you would have 800 pigs but in real terms this is around 250. This is where the 250*

[70] Abattoirs offer contracts to farmers which not only vary according to whether the meat is destined for bacon or pork, but vary considerably between abattoirs and even individual farmers

a week contract comes from. You do have the odd week when you only have 150 and next week 300 – if we can't fill out the contract Chris has other farmers he can draw upon to fulfil the contract". YFLM pig farmer.

Where this system fails is that there are a number of other members who are not under contract, but prefer spot transactions. Nonetheless, it is this ability to manage supply and demand at a weekly level for the processors, and thereby reduce the penalties charged by the retailers to the abattoirs for non-delivery, that enables the cooperative to increase the price paid for contracts by 3-4 pence per kilo above the published national average prices.[clv] This is believed to be predominantly on account of the size of the cooperative, in that the volume of pigs available to place in periods of excess is not seen to deflate the price in the short term to any real extent. There have been experiments to create a larger cooperative, but this was seen to have reduced their bargaining position. This perspective has been ratified by one of the marketers at YFLM, who stated that:

"I have the feeling that if you get too big people can't give you a decent deal because you are asking too much and if you stay slightly under the radar you can get a better deal, it is almost like size can be an advantage but it can also be a disadvantage"[clvi]

His view point had been greatly influenced by experiences in circa 2003 during which collaboration between 4 cooperatives had failed to deliver improved leverage due to the greater difficulties experienced in periodic abattoir "rollovers," in the placement of excess pigs on the spot market. "Rollovers" are a peculiarity of this industry and are those instances in which a pig farmer is contracted, for instance, for 150 pigs per week, but has a request for

fewer pigs one week than the designated number. The farmer is informed that a proportion of his pigs will be “rolled over” until the next week.

Where excess production is amalgamated it reduces the sum of their bargaining power. This occurs not only in markets where there is overproduction of pigs, but also in shortage markets. This can result in a longer term deflation of prices, not least because the DAPP are determined by the average price paid to farmers during the previous week. Where there is excess, there is a danger that larger operatives will place the pigs at a price that is lower than that of smaller operatives, thus deflating the prices for subsequent weeks across the sector. In periods of shortage, although it might be assumed that collectively the cooperatives could increase scarcity, the reality of the situation is counter intuitive. This is because of the "perishability", the short window of opportunity in which pigs may be "placed". Pigs can normally increase their weight by over 1 kilo of weight per day. Under contract, in which there are strict weight specifications, any delay in delivery to the abattoir can result in dead weights which exceed the optimal and thus result in a reduction in the price paid per kilo. Thus the placement of pigs is urgent when they reach specified probe and weight levels.

The issue is that when an agent has many pigs to place during weeks of surplus he has two choices. He must decide whether to retain the surplus until the following week, at which point, because of their weight and fat gain, the price per carcass would be penalised[71]. In fact the farmer is penalised twice, in that he can receive just £30 for the carcass and has the

[71] In some contracts the price paid per pig could be significantly lower than the cost of production, at just £30

additional costs of feed for each day delayed. Pigs tend to consume between 2.3-2.9 kilos of feed per day at a cost of £300 per tonne. [clvii] [clviii] Alternatively, the agent could choose to reduce the price to a level which will sell to alternative markets. In either case, any price reductions will be calculated into the DAPP pig price in the following weeks.[72] Furthermore, in times of shortage, larger coalitions are unable to attain an equal to the increased prices attained by smaller coalitions, where buyers may switch with ease to European producers.

It becomes apparent that YFLM is more able to act in the interest of the cooperative members than a larger cooperative, but neither large nor small are able to effectively close the market in the light of EU competition. Yet it is doubtful whether the influence YFLM holds over prices is to the advantage of the cooperative members over the longer term. Historical evidence suggests that the ease with which retailers switch pork suppliers through the vehicle of their category leaders has led to prices below the costs of production. Farmers have left the sector, which in former times, as supply dropped below demand, would have led to the "cobweb" effect in UK pig production.

A further aspect which emerges from this study is that traditional cycles in pig prices appear to have been altered as a consequence of retail pressure on prices. Over the 10 years prior to this research, while there have been cycles in pig prices, price increases have not resulted in corresponding increases in the number of UK pig farmers or breeding sows. The pressure on

[72] Pricing structures do vary across members depending on the retailer specifications. Price structures range from cost plus models to 50% DAPP plus 50% cost plus. Variations are found also around weight and probe levels. Dead weights can vary from 55-75 kilos whilst probe levels can vary from 12-14 mm. In some contracts, above the ideal weights will not incur significant losses to price per kilo received by farmers, in others very severe penalties are incurred.

prices experienced by Category leaders, such as Tulip, as discussed earlier, has encouraged imports from mainland Europe and in particular Denmark. UK[clix].

As EU imports into the UK have increased, the natural cycle in UK pig production has become less apparent, and despite periodic price increases, the UK herd has continued to decline. This problem has been further exacerbated by a highly concentrated UK retail sector and the relatively high costs of production in the UK.[clxclxi] Subsequent increases in costs following the introduction of EU regulations on pig welfare in other member countries as well as the rise of the Euro against the pound have done little to help the sector. Current UK pig production numbers are not only significantly lower than levels of consumption but are also lower than 1998 levels. Not surprisingly, despite the decline in numbers of UK farmers, there has been no significant corresponding increase in price. Farm gate prices rose between 2007 and 2010, but not sufficiently to draw farmers back into the sector, despite a rise in price in 2008 to £1.36 per kilo, a level which allowed farmers to operate at a profit.

An examination of the distribution of economic surplus throughout the supply chain shows a similar picture. In 2002, farmers received as much as 40% of the share of retail prices; this had declined to 25% by 2009 and currently stands at 20% (August 2011figures). YFLM members were attaining around 3 pence more on average depending on herd health, the feeding and husbandry systems and the spot price of wheat. Variations in costs of production could mean that the price per kilo could for some farmers be 4p below the costs of production.[clxii] As one farmer said:*" I don't want these publishing in Pig World but ..*

total costs came to xxx pence per kilo and a net sale price of xxx pence per kilo, this gave a net loss of -4.13 pence per kilo."

Although another farmer on a wet feed system claimed:

"our average price is 118 pence per kilo and our breakeven price is 112 pence so we are making 6 pence a kilo"

Although the evidence is less conclusive, it is apparent that abattoir margins have also been declining. Claims were that in 2008-2009 abattoirs grossed margins of -5%, which meant a loss of £4 per pig, a figure that differs from the figure of +2% as claimed by the Competition Commission in 2006, which would suggest that margins for abattoirs declined by 7% over that period.[clxiii] By 2010, it may be seen that margins have improved, where, for instance, it can be seen that a margin of around £4 per pig is received by abattoirs, which is more a consequence of improved efficiencies in the key abattoirs than improved wholesale prices[73].[clxivclxv] However, it becomes evident that entry of multiple retailers and their dominance within the market has not simply reduced prices through the compression of margins throughout the upstream supply chain but also reduced the impact of the traditional issue facing the pig sector, that of the impact of price oscillations on the pig farming sector[74]. This, however, has not been to the advantage of the sector as a whole, and the UK pig farmers, including YFLM members, have continued to exit the sector, irrespective of the above normal prices attained by YFLM.

[73]. Recent examples of rationalisation include plant closures made by Tulip in which a total of 1300 jobs were lost between the periods of 2009-2010.

[74] As discussed earlier, price oscillations were traditionally a problem because pig farmers would enter or exit the market, depending on the price

9.2.2. Retail consolidation and the cooperative as a counterbalance – increasing motivational interest

The decline in the numbers of UK pig farmers places the long term survival of the cooperative in question. The cooperative is fully aware of these dangers and over recent years has made some significant attempts to develop added value services and more latterly added value products to redress this position. Where there is a surplus of funds raised from marketing fees from members and placement fees from abattoirs[75], this is not returned to members but has for many years been utilised to invest in additional activities and services.[clxvi]

These have included the setting up of YFLM piggeries as a means of protecting against deficit supply. Another such initiative is the Yorkshire Outdoor brand, which was launched in November 2008. The product was placed in Asda, Tesco, Costcutters, Morrison's, and the Cooperative, and included sausage and bacon. Pigs were slaughtered at a small abattoir in Leeds. In effect, the Yorkshire Outdoor brand is an attempt to improve the motivational interest of the buyers. The brand is in line with government policy and consumer interests. It is a *local product* made from outdoor reared pig, but there were a number of factors that have inhibited its success. In the first instance, though the brand has been quite well established within the region and farmers receive a higher farm gate price, it has failed to improve the leverage position of the cooperative.

[75] The amount paid to the cooperative for each pig sold is an amalgam of both these fees and the total figure is around 80p per pig.

The brand holds but a very limited percentage of the total sales of either sausages or bacon of any of the retailers, where 82.6% at the time of the launch were retail own label.[clxvii] It is important to note that the specialist niche market of local, free range pork produce only represented around 2% of the total market. Sales of local food were predicted to grow, but the 2008 banking crisis, which occurred at the time of the product launch, curtailed this eventually. Although the brand was launched at three of the top retail companies, these actual sales only amounted to 20-30 pigs per week. This figure represented less than 1% of regional sales, both in terms of volume and value, compared to national sales of over £3.9 billion, of which 30% are sold by Tesco and 20% by Asda. This suggests that the contribution of the product to the retailer revenue and core competences is less than negligible, particularly given the ready availability of close substitutes.

The inability of YFLM to sufficiently improve leverage from added value products persists even where pressure has been placed on retailers by the farmer funded BPEX (British Pig executive). There is some evidence that retailers have demanded more UK pig, most particularly since the farmer led "pork is worth it" campaign of March 2011, a promotion of the importance of self-sufficiency. Companies such as Tesco and Morrison's have published changes to the sources of pig meat. Tesco reduce the proportion of pork sourced from the EU and Morrison's switched to 100% British pork.[clxviii]

However, there is no evidence of any impact on farm price; indeed, it is notable that Tulip, the principal supplier to Tesco, which represents 30% of YFLM sales, have dropped their price by 2 pence per kilo. Any marginal increase in returns to farmers is a consequence of

the 2-4 pence increase in price per kilo received by farmers who switch to outdoor reared pigs. Lower conversion rates from feed to meat mean that there is around an 8% increase in costs, but this may result in a 29% increase in revenue, deriving both from higher farm gate prices and a lower infant mortality rate.[clxix]

So there are gains in price per kilo, but these are small, as indeed was the level of output. Yorkshire Outdoor Products may not have improved the cooperative leverage position either from relative scarcity, or operational / strategic importance. What is more, production costs were greater than the factory gate price of £1.69 per pack.[clxx] Investment in the plant in 2008 came to a total of £87, 000. This resulted in high labour costs and because of the small production volumes a high unit cost. The investment was part funded by Yorkshire Forward and had five years of funds retained from fee surplus, but by late 2009 they were forced to subcontract the production of these sausages to a rival, Sykes House, who had a greater automation and thus could reduce unit costs *to ensure a margin.*

9.2.3. Longevity and cohesion-the costs of coalition

Despite consistently low prices, in the main, members perceive that the costs of coalition are low. Indeed it is apparent that the personal service offered by the cooperative coupled with the provision of additional services have supported the increase of productivity of farmers and reduced the high risk of financial loss that is a characteristic of this sector. This support appears to be valued by cooperative members.[clxxi] When the costs experienced by the members are examined it is evident that the costs and risk of cost are significantly lower than

supplying direct to processors/abattoirs. More explicitly, if one looks at asset specific costs: physical, dedicated, human, temporal and brand, these are minimal; despite considerable investment in the Yorkshire Outdoor brand, bio digesters and the share of the farming scheme operated by YFLM, these are perceived to have had little influence on net returns.

While physical asset costs are present, in particular costs associated with adapting farm practices and facilities to adhere to the new rules on pig welfare, these are not idiosyncratic either to the cooperative or to any specific contract negotiated by the cooperative agents. The implementation of directive 91/630/ec by UK farmers has resulted in a 34% increase in total costs, with investment costs representing around 34% of the total costs sustained by farmers. Other physical asset costs may be attributable to the costs of meeting the contractual terms, although these vary according to the contract. A comparison between two contracts, one with Tulip and the other with Cranswick, may be used to illustrate this point. In one contract the abattoir/processor Cranswick offers members a DAPP plus 4p, with a base price offered of between 55-95 kilos and up to 14 probes, with no deductions to the base price on weights less than 100 kg, but with 20p deductions on base price for every kilo over 100. Tulip, in one of the contracts offered to YFLM members, heavily penalises overweight pigs. Pigs of 100 kg dead weight will give maximum total revenue of £30.[clxxii]

The distinctions in contractual terms are of particular significance where farmers are required to "rollover" stock from one buyer to another. In this instance, if they were to have stock rolled over by Cranswick to supply Tulip, this could lower the benefits they receive, but would rarely be accounted as a physical asset cost, predominantly because this is not

idiosyncratic to YFLM but a function of the sector. This does not refute the position that each contract imposes particular constraints on the method of producing pork. Nor, despite the lack of dividend and heavy investment by the cooperative in added value activities, is there any apparent sense that these are perceived as dedicated costs attributable to membership of YFLM.

One key cost incurred by the members is that of transport. Previously pigs had been transported by rail and despite the 150 mile restriction on the transport of livestock, the cost to farmers may be as much as £3.00, with an extra 9p per carcass attributable to the sanitation of lorries between loads. [clxxiii] However, one of the key objectives of the marketing agents has been to minimise the asset specific costs to members by selecting the type of contract that best matches the farmer's system of feeding, and management of the farm. A close relationship between the farmer and marketer within the cooperative ensures an exact knowledge of the costs of production along with an understanding of standard yields, growth, and mortality rates. Furthermore, problems associated with temporal specificity associated with "rollovers" and the risk of overweight pigs are attenuated through the use of back up buyers of pig meat.

9.2.4 The distribution of costs between members and the non-excludability of benefits

Similarly, few farmers portrayed any fears about the costs of coalition, whilst others benefited. Certain larger farmers have perceived that the cooperatives are placing their own pigs in advance to the disadvantage of their members, but this fear was not widespread. The

interesting phenomenon within the pig industry is that, particularly given the small size of the sector as a whole, there emerge clear friendship networks between specific marketing agents and the farmers. This inhibits much of the perceived costs of agency, in that single farmers would appear to remain loyal to one marketing agent, where ever they might be. When a marketing agent moves from one marketing company to another, there is a tendency that their "customers" [76], i.e. the farmers, would follow.

Claims were made that the reason for continuing the relationship with the cooperative was a function of their continued involvement with the marketer, i.e. that *"Robert*" or *"Chris"* "were" the reason for not switching companies. Comments such as "*I have only ever sold pigs to x and when he has moved I have moved with him"* are representative of this[clxxiv]. For small holders with a regular turnover of pigs, where precise numbers to be generated per week are not entirely predictable, this level of confidence in the ability of marketer to place pigs underlies the member loyalty. Member loyalty in this case is not a function of the coalition, but of their personal relationship with the marketer.

There is a strong recognition by the members of the reality of the claims made by marketing staff that their primary focus is to facilitate and delight their customers. With hands on knowledge of pig breeding, pig management and the market, the YFLM marketers / agents are well positioned to best match the pigs to specific contracts and offer aid and support for herd improvements (known as clean outs[77]). As members of staff they are in receipt of a

[76] This is the only sector I have talked to that describes their members as customers.
[77] Clean out is where the whole herd is sold or slaughtered and the facilities are given an in-depth clean, a "clean" herd is then bought through one of the breeding companies and the facilities are then repopulated. This enables the farmer to reduce the inherent disease which affects both weight gain and premature mortality rates

salary, but this is not linked to input, which more often than not is in excess of their paid hours. There are certain larger farmers who perceive that the number of people deployed by the cooperative to deliver 5000 pigs[78] per week is excessive, particularly those supplying directly to the abattoir sector: "*we market from our kitchen table*" farmers; however, this is not representative of the whole.

The problem of transaction costs is also mitigated by the attitude of these agents. In acting in the interests of a declining pig industry, the marketers ensure that much of the transaction costs of coalition are absorbed in the marketing fee and fees paid for placement paid by the abattoirs. Despite the diversity of the membership group, the marketers' personal understanding of each of their "customers", and the efforts they make to place each batch of pigs with the view to maximise returns, eliminates any need for internal lobbying and metering. Nor are there any perceived shirking costs, because each "customer" receives a personalised service, as epitomised by this comment from a YFLM member:

"You knew that your money was safe and for speaking to someone on a weekly basis who you knew they were going to try their best or advise, knew the market, knew what was happening on spot price, contract price, across all abattoirs, uhr could advise you on contracts when they came for renewal, kept you up to speed with what was happening and at the same time in Yorkshire Farmers 'cos they are always buying feed because they are involved in their own pigs, so they know that if you want a bit of advice on what soya price is doing at the moment they offer. I often talk to Chris about that or on feed price."

In part, this is possible because there are 87 members of which 40 are regular suppliers.[clxxv] The openness of the cooperative enables members to seek their own solutions to excess

[78] Some changes could be changed as a result of their collaboration with the other cooperatives – need to dig out details associated with this

volume where possible but also allows the agents to bring in additional supplies where needed to fulfil contracts. Indeed the concept of service is seen by the agents to be critical to the survival of their jobs, as indeed the openness of the cooperative is essential to managing highly fluctuant volumes of pig supply.

9.2.4.1 Summary of findings associated with costs and cohesiveness

This suggests that the cohesiveness of the cooperative does not entirely stem from the small size of the cooperative or the homogeneity of membership interests. It suggests that it is the service of individual needs rather than by YFLM agents that both ensures the longevity of the cooperative and is of service to the sector as a whole.

Cooperative members do not support the cooperative because they will attain higher marginal benefits, or lower marginal costs than with alternative marketing agents, but because they know that they will experience lower on farm transaction costs than in direct supply. Where prices and demand are fluid, farmers are saved the expense of constantly surveying the market. Furthermore, they experience lower risk for the price[79] of dead on arrival insurance (about 12p per pig), credit insurance and early payment (11-18p per pig), which ensures that they receive the full worth against risk. Furthermore, for the price of 1.09p per pig per day, they receive payment within 10-12 days, which gives them a 20p per pig saving on farm costs.[clxxvi] This suggests that farmers remain in the cooperative as an

[79] Pigs are quite sensitive and may quite frequently die on the way to the abattoir, which means that they are not fit for purpose. Also the cooperative operates an indemnity insurance scheme which can ensure payment within 7 days or 11 days. Normal payment periods for the abattoirs may be as much as 60 days, and with the level of consolidation of the sector there has been and is a high risk of non-payment to farmers.

insurance against risk as they know they will receive one of the better prices for pigs at one of the lowest costs. The support by agents of the individual interests of farmers rather than corporate gain facilitates the retention of farmers within the sector and thus, to some extent, inhibits the decline of the sector as a whole. Nevertheless, this suggests that the farmers' rationale for remaining within the cooperative is entirely calculative.[clxxvii].

9.3 Lessons learnt

The examination of cooperative action within the pig sector also indicates that the cooperative under investigation has failed completely to deliver, although there is some evidence to suggest that the cooperative is able to improve the price paid to members over the short term. This was apparent both for spot market transactions and DAPP contracts. Over the longer term, the higher prices paid to members led abattoirs to switch to the lower priced pork produced in mainland Europe. Although the recent shift in Sterling against the Euro and the harmonisation of welfare legislation may alter the balance of UK versus European pork within the UK market, there is no evidence to suggest that this will be to the financial advantage of members or indeed UK farmers in general. The investment in processing has not served to redress the balance of power. Nonetheless, the cooperative has survived, despite a considerable reduction in the number of farmers in the sector and a failure to increase scarcity, relative scarcity and motivational interest. This is because the cooperative has continued actively to deliver perceived net benefits to its "customers". The value of the cooperative is in the additional security it offers to farmers in an industry where

there is a risk of non-payment because of buyer bankruptcy or other factors which lead to payment delays or reduced payments.

9.3.1 Creation of leverage through absolute/relative scarcity and/or motivational interest

The exploratory framework suggests that where benefits are not created through increasing either scarcity or utility, members will exit the cooperative. YFLM is able to influence price, but in this case there is little impact on the long term share of surplus retained in the farming sector, and returns may not be sufficient to maintain a UK pig industry. This is because of changes to the marketing channel and the emergence of a highly concentrated buyer's market which stemmed from the consolidation of the retail sector, coupled with changes to pig welfare legislation in the UK and the strength of Sterling against the Euro.

These factors did not stem the fluctuations of price, which are a function of short term changes in supply and demand. This is because under the current pricing system, where the contractual prices are linked to weekly changes in market price, when the spot price rises above the contract prices, farmers may switch from contracts in order to benefit from the higher price. Whilst in the short term this raises the price for all UK farmers, over the longer term, higher prices incentivise processors to find pigs from the EU, to whom the UK is particularly attractive when the Euro is low against Sterling. As a consequence prices fall and many UK pig farmers leave the sector.

When supply falls, the price has not recovered sufficiently to act as an incentive for farmers to reinvest in pigs. YFLM, like many of the agents, are able marginally to increase the price received by farmers by collating supply, and they play a valuable role in managing excess and shortage in the short term to the advantage of members. Nevertheless, any attempt to create relative scarcity has failed. Coalitions with other cooperatives have simply resulted in less bargaining power on spot prices, and the ability to bargain on the futures (contract) markets depends on the prices received at spot.

Even attempts to add value and increase the utility of the products have failed due to insufficient consumer interest. Turnover has increased but the revenue generated is not sufficient to justify the expenditure. While this position might change if a large number of European farmers exit the market on the complete adoption of the new welfare regulations by 2013, at present, contrary to the proposition, the cooperative is sustained despite the fact that benefits are not attained. Furthermore, where prices paid to farmers are highly sensitive to the level of demand and supply it is highly improbable that given current downstream structures benefits could be attained, particularly given the dominance of retailers within the supply chain.

9.3.2 The longevity of the coalition in relation to perceived costs of coalition

Once more this case study appears to show that the survival of the cooperative is a result of rationally economic decisions by members. In situations where costs exceed benefits, farmers have been shown to leave the cooperative. This was also true in this case, but in this

case most farmers are staying within the cooperative, the reason being individual net benefits that are a function of the value they gain from the personalised service.

The findings suggest that the perceived costs of the coalition are lower than the benefits. Within YFLM there are few marginal costs of coalition perceived by members, a factor which stems from personalised service received by members from marketing agents. It is suggested that cooperative members support the cooperative not because they will attain higher marginal benefits or lower marginal costs than with alternative marketing agents but because they know that they will experience lower on farm transaction costs than in direct supply. Where prices and demand are fluid, farmers are saved the expense of constantly surveying the market. Furthermore, they experience lower risk for the price[80] of dead on arrival insurance (about 12p per pig), credit insurance and early payment (11-18p per pig), which ensures that they receive the full worth against risk. Furthermore, for the price of 1.09p per pig per day, they receive payment within 10-12 days, which gives them a 20p per pig saving on farm costs.[clxxviii] Such forms of insurance are not restricted to this cooperative, but can be found in others.

In addition, while members are required to contribute to dedicated investments such as the YFLM pigs and Yorkshire Outdoor Pork brand, these are not perceived to be idiosyncratic or

[80] Pigs are quite sensitive and may quite frequently die on the way to the abattoir, which means that they are not fit for purpose. Also cooperative operates an indemnity insurance scheme which can ensure payment within 7 days or 11 days. Normal payment periods for the abattoirs may be as much as 60 days, and with the level of consolidation of the sector there has been and is a high risk of non-payment to farmers.

of any prolonged magnitude. The lack of awareness of the specifics and the tradition of not paying income surplus to the farmers has meant that these investments are generally not recognised as costs. The strategy of consistently retaining any surplus in value and investing in initiatives designed to either reduce costs or increase the price received has not aided the cooperative to improve their share of economic surplus, or even greatly reduced the marginal costs over marginal benefits for members, but what it has done is enabled the cooperative to improve the service in a sector that is characterised by individualistic calculatively rational individuals.

9.3.3 Problems of non-excludability

The findings are even more interesting with the issues of non-excludability. As a small cooperative one might have expected to find a strong level of cohesiveness based on common interest. This is all too evidently not the case. Whilst the industry itself is small and littered with working groups under the remit of the British Pig Executive, each looking to improve the practices in and efficiency of the industry, pig farmers place self-interest far above that of the collective because of the high risk of moral hazard and non-placement of pigs.

This is managed by marketing staff, which believe that the value of the cooperative is determined by the quality of the personal service offered. In consequence, farmers, whilst cognisant of the value of the cooperative as a means of reducing effort and risk at an individual level, are transient parties, and are more loyal to individual marketers than

the collective as a whole. As indicated earlier, the marketers expect to take a percentage of their "customers" with them when they move employer. The case study also throws light on the issue of external free-riding. In the pig industry, unlike, for instance, the grain futures or milk markets, contract prices vary according to average prices received from all pig sales from the previous week. While there has been an increase in cost plus and combination pricing structures, it would appear that the predominant measure of the price on a week to week basis under contract is that of the DAPP. This means that any price received is dependent on the number of pigs which were up to the agreed weight and probe levels on all contracts, and the extent to which price penalties are served on farmers by the abattoirs. The ability of the cooperative to exclude the impact both positive and negative on the sector because of the pricing mechanism is negligible. It is questionable whether such a mechanism, which was part of the mechanism deployed by the 1932 government to encourage pig farmers, reduce price oscillations and increase the self sufficiency of the sector, is to the benefit of the industry, given the original remit of the cooperative.

9.4 Conclusion

In the context of this thesis, it is argued that cooperative actions are able to deliver improvements in profitability in agriculture when they are able to increase benefits, and where benefits to members outweigh costs. It is held that where cooperatives can increase gross benefits and where those who bear the costs reap the benefits, collective action will be sustained.

In the previous two case studies, findings suggest that the sustainability of the cooperative is not necessarily a function of their ability to generate benefits in situations where benefit refers to increased leverage against their buyers. Findings indicate that certain products have distinct qualities which increase their price and demand sensitivity. In this case the speed at which pigs increase weight and probe levels means that there is a short timeframe in which pigs can be placed, which means that the farmer is prone to moral hazard, a position which is made worse as a result of downstream industry structure and the pricing strategies deployed by the abattoirs. In highly contested markets, though retailers are able encourage abattoirs to switch suppliers, even where farmers are under contract, the cooperative has become unable to lever greater value for its members.

This study was selected in order to examine the potential of YFLM to act as an effective mechanism through creating relative scarcity, and more latterly to increase motivational interest through the production of the Yorkshire Outdoor Pork brand. However, the cooperative has failed to achieve either of these objectives. It was further anticipated that as a smaller cooperative there would be limited risk associated with the lack of internal cohesion, and again the case would seem to question this proposition. In addition, in the context of proposition 3, the boundaries between the internal and external market place appear to be infinitely and reciprocally permeable and hence the issue of external free-riders is to some degree inappropriate, because when there is a continual cycle of pig volumes and prices, the presence of a pig cooperative can in shortage markets have a positive impact as well as a negative one. Even on a weekly basis it can have both a negative and a positive yardstick effect. Once again it raises the question as to why the cooperative has not failed,

and it becomes apparent that as long as there remain sufficient numbers of smaller farmers within the sector, members are interested in maintaining a relationship with an individual who can be relied upon to market their pigs to their best advantage and provide a service that relieves the farmer of the perpetual task of searching for the best deal for all or some of their pigs. The farmer reduces on-farm costs significantly by passing on the job of both placing pigs and locating alternative buyers when numbers of pigs exceed contractual terms. Such service is a key element in the choice of the agent and the cooperative.

CHAPTER 10 – DISCUSSION

10.0 Introduction

In the context of the decline in global farm prices and international pressure for trade liberalisation (Drummond et al., 2000; Ward, et al., 1998; Oglethorpe, 2005), the aim of this research is to gain a greater understanding of the extent to which agricultural marketing cooperatives can address the crisis in agriculture.

In the aftermath of deregulation, policy makers hoped to improve the financial position and sustainability of the farming sector by seeking alternative market opportunities and improving the efficiency and effectiveness of the food supply chain. These events were to be promoted through the government promotion of both vertical and in the context of this research *horizontal* collaboration within the food chain (DEFRA, 2000; Curry, 2002; DEFRA, 2006). This research thesis questions the effectiveness of farmer coalitions in current market structures. In the exploratory framework, as seen in chapter 4, it has been suggested that in order to serve the interests of farmers, cooperatives need to be able to achieve leverage and cohesion.

As discussed earlier, cooperatives are being touted as a solution to the problems facing agricultural producers through offering farmers the potential to a) generate added value

products to differentiate them within the market, b) provide a countervailing power when faced with downstream market concentration. This thesis draws upon two key bodies of literature drawn from in the first instance *Power Dependency Theory* and in the second common property and free riding problems within collectives (Olson, 1965). This literature exploratory research framework suggests that cooperation of this kind will only be an effective counterweight when the cooperative is able to achieve either scarcity relative to that of the exchange partner or improve the motivational interest of the exchange partner. Even where benefits are attained, cooperatives can be undermined as a consequence of the lack of cohesion and the free rider problem (Olson, 1965).

This leads to the position expressed in the exploratory framework, that where there is a lack of organisational cohesion, the cooperative may be unable to act as a counterweight and deliver benefits, and conversely the failure of the cooperative to act as a counterweight may lead to a loss of organisational cohesion. The exploratory framework has further suggested that the presence of external free riding may similarly impact on the ability of the cooperative to deliver leverage.

Following the examination of three case studies, the findings of this research are that all the three cooperatives have largely failed to deliver improved leverage. This failure can be attributed to the imbalance in the distribution of power within all three food supply chains. This position is analogous to the problems experienced by non-cooperative firms (Cox et al., 2005; Hingley, 2005). Furthermore, findings were not inconsistent with the suggestion that even where leverage is improved, cooperatives are unable to exclude free riding problem.

The loss of cohesion can result in member defection, increasing the burden of costs to members and further encouraging members to defect, thereby undermining the longevity of the cooperative; an event that has been witnessed in both commodity and added value marketing cooperatives. However, the research findings did point to the idea that cohesiveness of cooperatives in general may not be a consequence of the achievement of greater leverage and improved farm gate prices. The findings, suggest that in the three cases examined, cooperatives continued to operate because they either a. delivered other benefits, b. were a better solution to marketing than other options or c. members had sunk costs in the cooperative and the cost of leaving the cooperative was greater than remaining.

These findings and their implications for the development of an explanatory model will be examined in more detail throughout this chapter.

10.1. Summary of findings

The UK Government policy implies that the formation of cooperatives reduces the ability of the dominant party to seek gratification elsewhere, thereby creating a climate for the delivery of a fundamental transformation and enabling farmers to become price makers. This position is in line with many EU and Non EU countries (Hendrikse, 2004).

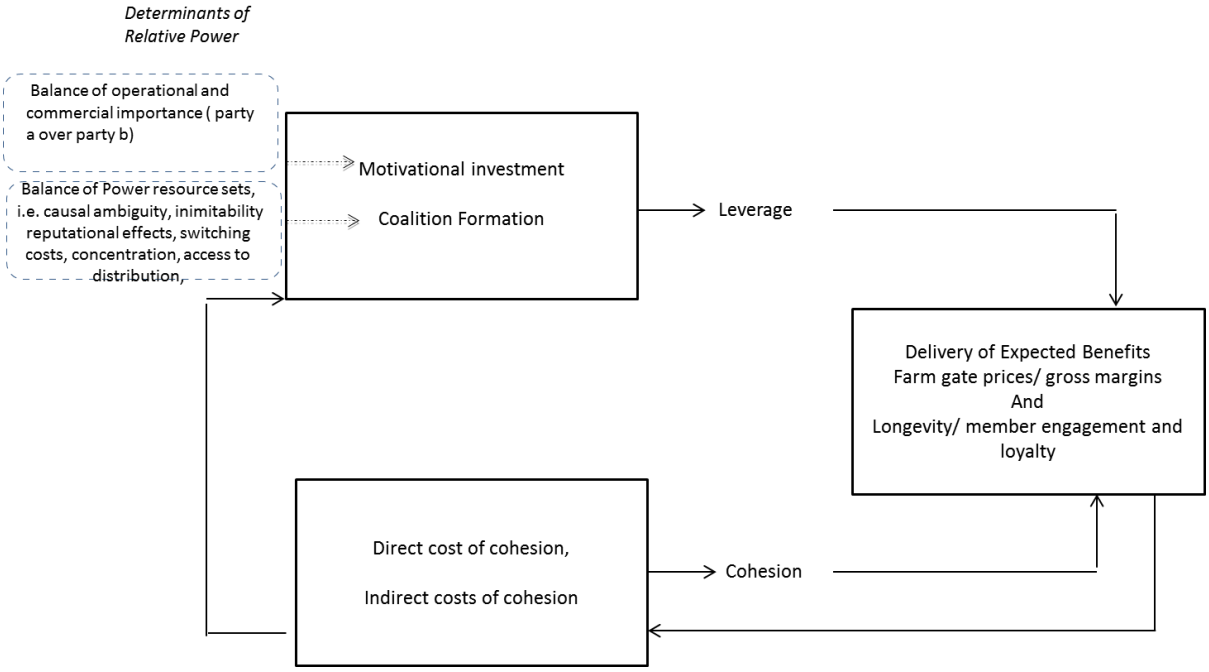


Figure10.1 the exploratory framework

As is represented in figure 10.1, the exploratory framework was devised from the two existing strands of literature on cooperatives (Emerson, 1962; Olson, 1965). This was then used as a heuristic device in this research. As discussed in chapter 5, this stage of the analysis involved an analysis of the data through content and thematic analysis and cross comparisons of the findings within each of the case studies, through comparative analysis.

In the first part of this section, the author examines the evidence from the case studies and explores the effectiveness of these three cooperatives as a means of redressing power imbalances.

10.1.1 Redressing power imbalances

All cases suggested that the ability of the cooperative to improve margins and farm gate prices was severely restricted when supplying into a highly concentrated and indeed contested market. Cooperatives faced severe competition not only from their horizontal competitors, but also from buyers, and this blunted any impact from collective action. SGT and First Milk have not increased leverage through attempts at increased scarcity and where, as in the case of First Milk or YFLM, investments have been made in added value products such as cheese and sausages, there is no evidence of improved leverage either. The attempts of YFLM to increase relative scarcity have proven to be of some benefit to farmers, but their success over the longer term would appear doubtful. In all three cases, whilst the cooperatives are continuing to trade, the industry is shrinking as a whole.

Figure 10.2 Summary of findings – the ability of the cooperative to improve leverage

Is there evidence that the cooperative/s have been able to improve leverage through scarcity or motivational investment	SGT	First Milk	YFLM
Evidence of the impact of absolute/relative scarcity on farm gate prices/ margins	Unable to increase scarcity	Unable to increase scarcity	Able to increase relative scarcity
The cooperative was able to increase the motivational investment of the grocery multiples;	Unable to increase motivational interest	Unable to increase motivational interest	Unable to increase motivational interest

10.1.1.1 Absolute/relative scarcity

The ability of the cooperative to generate increased leverage through engineering an increase in absolute/relative scarcity, as explored in chapters 2 and 4, is contingent on the balance of specific power attributes, such as causal ambiguity, inimitability, reputational effects, switching costs, concentration and access to distribution channels.

As shown in figure 10.2., the findings of this research suggest that whilst in the case studies selected the cooperatives have been unable to achieve a position of scarcity to any extent, these findings are not inconsistent with the ideas that cooperative could increase leverage in order to generate improved farm gate prices. This will be examined in more detail within this section.

The position held within the exploratory framework was that if the cooperatives were able to achieve a position of absolute scarcity, it would be anticipated that they would be easily able to find alternative buyers and offer products that are difficult to substitute in a market with low levels of competition and contestation (Porter, 1985; Barney, 1991). Were the cooperative to be less dependent on their buyers, there would be limited or no constraints or costs associated with switching distribution channels. This would be of particular significance if they were either cost leaders or offering a differentiated product and if the market was significantly concentrated to inhibit the switch of buyers to alternative channels (Porter, 1985: Barney, 1991). In the event, the cooperatives studied failed to achieve absolute scarcity, but more importantly the findings suggest that even where absolute scarcity is not achieved, farm income would be lower were the cooperative not present.

Such findings suggest greater complexity to cooperative success than is apparent in the exploratory framework.

Each of the three cooperatives examined are/were highly dependent upon their buyers, despite the presence of few alternative suppliers. In the cases of SGT and YFLM, whilst there were any number of substitute growers and farmers, a function of the GATT agreements, there were a limited number of direct competitors to the cooperative. Yet they are unable to either increase their leverage position in respect of their buyers or close the market. This is because they were disproportionately small in contrast to their buyers. The members of SGT represented fewer than 10% of the total number of UK growers, whilst the proportion of members of YFLM out of the total holdings represented less than 2%, with a year on year decline in numbers of potential members. Furthermore, despite being promoted as British through lobby groups and governmental promotional executives, both commodities were easily substituted by retailers who were able to draw from a surfeit of overseas supplies. The ease of substitutability was in the main a consequence of the relative indifference of consumers and the limited operational and commercial importance of British produce.

Equally noteworthy is that in both these two sectors, the proportion of home group produce to total supply continues to decline. Whilst average figures for self-sufficiency are 60% across other indigenous products, the top fruit and pig sectors provide 25% and about 40% respectively of total supply. This is because in both cases the reduction of possible exports to third countries by the major agricultural producers in Europe has resulted in the erosion of

the position of UK producers, because the UK has persistently failed to improve efficiency of production in line with its European competitors. Strong agricultural countries such as Denmark and the Netherlands are producing at a more competitive cost than their UK counter parts, and, as suggested by the exploratory model, offer a ready substitute to UK pork.

Even in the milk sector, where there are barriers to entry for imports, a consequence of the UK consumers' preference for "fresh" milk, UK cooperatives have failed to compete against their EU competitors. In the past, coalitions such as the MMB and Milk Marque were able successfully to create absolute scarcity and fix prices (Empson, 1998). This was because they were able to control both the supply and the market, essential in a product characterised by a short shelf life and vulnerable to moral hazard. More recently, milk cooperatives have failed to maintain their hold over both supply and demand, a consequence of the dual impact of the acquisition by EU cooperatives of UK Dairy interests and the astringent UK competition policy (Frank, 2001). The failure of the UK government to allow Milk Marque to move into milk processing has increased the vulnerability of the emerging smaller UK cooperatives, offspring[81] of Milk Marque. These three cooperatives have not only failed to gain a significant share of the processed milk market but have collectively lost control over milk supply.

[81] These were known as First milk , Milk Link and Dairy Farmers of Britain at the beginning of the research but initially Axis became First Milk and Zenith became Dairy Farmers of Britain

Competitors, through poaching the most accessible farmers, are able to undermine the ability of the cooperative to create scarcity and place pressure on farm gate prices. Yet, the inability of First Milk, and its predecessor Milk Marque, to assume control over demand was not solely a function of horizontal competition, but also a consequence of the introduction of two additional tiers of intermediaries. In the first instance, retailers became an intermediary between the dairies and consumers as they emerged as main purveyors of milk to the consumer market. In the second, in an attempt to ensure their power position, retailers introduced an additional tier, that of Category Managers. Retailers took over the consumer market by introducing milk as a loss leader, and when faced with the increasing consolidation and contestation of their supply base ensured their power position through the locking in of key dairies through offering them the role of category leaders. This strategy was not isolated to the Milk sector and is evident in both the other two cases.

In the case of SGT, the large numbers of acceptable substitutes have meant that retailers have switched to an increasing number of overseas suppliers. This is despite the presence of lobby groups for British fruit. The result has been a failure by SGT to safeguard farm gate prices at a level greater than the costs of production, a position aggravated by a consolidated buyer's market and a decision made by SGT and Chingford to reduce their customer base. Both SGT and the category manager Chingfords have tied up the lion's share of their business in their key customer Sainsbury's. In line with research undertaken by Cox et al., this would appear to suggest that this action has not enhanced their operational importance to either the retailer or Chingfords (Cox, et al., 2002).

Conversely, the retailer, because of dedicated supply conditions and high switching costs for suppliers and the ease by which they can switch suppliers, has effectively increased their operational importance to the category leaders, Chingfords, and consequently the topfruit cooperative SGT (Cox, et al., 2002).

Yorkshire Farmers Livestock Market Ltd has also been unable in any real way to improve leverage through scarcity, in the face of vertical competition from multiple retailers. As with the other two sectors, traditional distribution channels have been eroded, to be replaced by dedicated supply chains, now managed by category leaders, to the multiple retailers. Deterred from sourcing to alterative buyers and in the presence of a contested supply market, category leaders are put under pressure to cut costs and attempt to constrain the prices paid to the cooperative members.

What has been particularly notable within the pig sector, though, is that the cooperative is able to improve average prices for members during weeks of shortage. YFLM have been able to improve farm gate prices for members through management of supply and demand at a weekly level for the processors. This has proved to be counter intuitively a function of their restricted size and the small numbers of excess pigs they have to place.

However, while the ability to play this role in the short term is of value to YLFM members, the ease of switching between suppliers over the long term, particularly to those located in Europe, infers a longer term deflation of prices paid to producers located in the UK and the exit of a large number of pig farmers from the sector. This position could change on the full

adoption of the new welfare constraints by European producers, but even were European farmers to exit the sector as a consequence of the increases to on-farm costs; there is no certainty that the possible ensuing price increases would stimulate the resurgence of the UK pig industry.

In conclusion, the suggestion that the cooperatives are unable to redress power imbalances through coalition formation is not contrary to the ideas extracted from the work of Emerson, but findings suggest that the cooperative is not a sufficient counterweight to redress power imbalances when faced with current downstream market structures. Nonetheless it is apparent that without cooperatives, the UK farming sector would be suffering an even greater crisis than currently.

To some extent findings are in line with research undertaken by Hendrikse et al. (2001), where the suggestion is that cooperatives were under threat because of the disappearance of shortage markets. Interestingly these ideas are consistent with research conducted in the context of the non-cooperative firm, where similarly it was found that the power distribution within UK retail supply chains inhibited leverage (Cox et al., 2005; Hingley, 2005b).

10.1.1.2. Motivational interest -status giving

Two of the three cooperatives have also made the attempt to improve leverage through the introduction of branded products. However, as with the issue relating to scarcity, neither cooperative has really improved the position of farmers, although it is important to note that some benefits have been accrued. The ability of the cooperative to improve status and

leverage, as explored in chapters 2 and 4, is contingent on the balance of specific power attributes, these findings are summarised in figure 10.2 and will be discussed in more detail in this section.

As is noted in chapters 2 and 4, the exploratory framework suggests that cooperatives would be able to deliver leverage if it were to become more indispensable to the buyer in terms of its contribution to the buyer than the buyer was to them (Cox et al., 2002). This is seen in terms of operational importance, relating to proportion of spend and tacit knowledge and strategic importance of supplier to the buyer, as seen in terms of the impact of revenue and image. As expressed in earlier chapters, the ability of cooperative to increase motivational interest is not purely dependent upon their power attributes, but the relative balance of power attributes held by both parties (Emerson, 1962).

What is clearly evident in the case of First Milk is that investment in Cheese production, a strategy that was to serve the dual purpose of reducing the costs of collection from more peripheral farms and of increasing motivational interest of retailers, has failed to deliver significant returns. Whilst First Milk has, in effect, materialised as a category leader, its strategy of developing provenance brands and "adding value" has generated little leverage in a market where manufacturers and retail own branded products are prolific. Indeed, the requisite levels of investment have proved problematic for the cooperative as a whole. Furthermore, cheese, and in particular the ubiquitous cheddar cheese, is a widespread solution to the problems of milk perishability in anglophile exporting countries. This means that the cooperative has faced considerable competition and pressure on prices.

This position is similar to the experience of the pig cooperative, YFLM. Many pig farmers have diversified into the butchery and processing sector for the production of locally identifiable organic products like sausages and bacon. These have been sold both through mainstream retailers as well as through more niche venues such as farm shops and farmers' markets. Whilst direct sales to the consumer generate higher margins, these represent significantly less than 5% of sales, and in order to benefit greater numbers of members larger volumes need to be sold, and these can only be sold through multiple retailers.

The opportunity to augment retailer motivational interest has been found to be negligible and as the volume produced by the cooperatives increases there is a considerable risk of increasing both their operational and commercial reliance upon the retailer; an effect that can in fact reduce margins to a level that generates lower value than sales of pork. Despite media interest, local organic produce is of limited importance to multiple retailers in a market where private retail labels account for 80.6% of sales. Even in the case of Bramley apples, a product exclusive to the UK, consumers largely fail to differentiate on the basis of provenance.

In conclusion, with reference to the exploratory model, whilst there is some variability within these results, they do suggest that cooperatives endure despite their inability to improve leverage, although it is still contended that successful cooperatives need to improve leverage. Yet these findings place a question mark over the continued presence of the cooperatives within the market. It is evident that the continued presence of a cooperative in the markets is not necessarily a consequence of leverage. This means that there are strong

suggestions that not only are these findings not adequately explained by any previous research on cooperatives, but are inconsistent with current theory on determination of governance structures (Emerson, 1962; Williamson, 1985: Cook, 1995; Van Bekkum, 2001).

10.1.2 Findings on cohesion, and member costs

In parallel, the exploratory framework suggests that there is an iterative relationship between the cohesiveness of the cooperative and its ability to improve the leverage position of members and thus farm gate prices and margins. The framework suggests that the longevity of the cooperative and thus the delivery of increased farm gate prices and margins may be threatened where costs of cohesion to members exceed the gains. Members incur costs of cohesion as a consequence of direct costs of the management of the cooperative, the so called asset specific costs, of indirect costs of free riding, and of measures designed to inhibit free riding as in monitoring, sanction, lobbying mechanisms. These are noted in more detail in figure 10.3.

Figure 10.3 from figure 3.1 from Chapter 3 showing the costs of coalition

Figure 3. 1: Costs of tensions between individual and collective interests

Costs of the cooperative to members – tension between individual and collective good	
Source	Costs
Direct costs	
Asset specific investment	Site specific – extent to which the site can be relocated post contract Physical – assets to meet specific stipulations by the cooperative Human- specific skills or knowledge held by cooperative and cooperative members Dedicated – investment on and off farm in processes dedicated to key customers Brand – investment specific to a product or brand Temporal – assets which depreciate over time if not maintained
Indirect costs	
the common property and free rider problem	Internal – over production –costs caused by a decrease in price as a result of excess production levels by some or all members Non-alignment additional–costs experienced by compliant members caused by compliant members who are not compliant Non-investment off farm – failure or resistance to investment in processing, marketing and delivery systems, often due to problems such as horizon External free riding – members bearing the costs of cohesion where the benefits are non- excludable to external parties
Transaction costs	Metering/ monitoring costs –costs incurred in monitoring compliance Lobbying –costs of negotiation, influencing opinions Sanction and allocation- costs incurred in assuring compliance and loss of inefficiencies, where compliance measures fail Shirking cost –cost of compliance for compliant members not incurred by non- compliant members.
Agency costs	Costs of monitoring and costs of failure to monitor managers

However, as discussed in chapter 4, where these costs exceed alternatives or, as professed by Olson, where the marginal cost to the individual farmer were to exceed their marginal return, farmers would no longer perceive a value in membership and would exit the

cooperative, thereby undermining its cohesion (Olson, 1965). A comparison of the case studies shows findings are both congruent and incongruent to those suggested by the exploratory framework and the literature. This is as summarised in figure 10.4 below and will be explained in more depth within this section.

The cohesiveness of the cooperative declines where direct and indirect costs rise	**SGT**	**First Milk**	**YFLM**
The costs of organising and sustaining the cooperative were greater than the commercial gains obtained from leverage.	Perceived costs on membership are not greater/ equal to gains	Perceived costs greater than gains	Perceived costs are not equal or greater than gains
Cohesion of cooperative	Congruent -presence of cohesion higher direct costs on leaving the cooperative	Cooperative was losing membership through poaching – a position exacerbated by high costs of investment	Congruent - cooperative survived , lack of awareness of direct costs/ asset specific costs
Reason for cohesion	Sunk costs by members	Other benefits Least worst option for members Yardstick effect	Other benefits delivered to members

Figure 10.4 Costs and cohesion and longevity of cooperative

In the case of First Milk, operating in a highly contested dairy sector where the continual search for increased efficiency in processing is driven by the multiple retails, members experience high costs of asset investment, particularly in physical and dedicated investments. These have included cheese factories, shares in liquid dairy companies, milk swapping schemes and educational programmes run by First Milk Academy.

High direct costs have resulted in the disaffection of certain farmers, particularly those who believed that they were in receipt of little direct gain from the investment programme of the cooperative, described by the literature as the *portfolio problem* (Cook, 1995;.Sykuta, et al.,

2001; Chaddad, et al., 2004). Problems of this nature have been identified in the discussions leading up to the development of the exploratory framework in chapters 3 and 4 in which it has been suggested that larger cooperatives were at greater risk of higher direct costs of cohesion as a function of the heterogeneity of interests of members (Sandler, 1992; Hariyoga, 2004). In the case of First Milk, for whom the bulk of their pool of farmers are increasingly those who are geographically disadvantaged and of little interest to the non-cooperative dairies, heterogeneity of interests of members has been further increased as a result of the acquisition of creameries as a means of reducing transportation costs. Disaffection by more advantaged farmers is not simply a function of the cost of asset investment but their increased awareness of the destination of their milk as a consequence of contractual distinctions made between compositional and liquid milk. The ensuing member defection not only exacerbates the problem of how to attain financial equity, (Bijman and Ruben, 2005), but undermines even further the cohesion of the cooperative. These findings are largely in line with existing literature in which it is argued that larger cooperatives are more prone to the loss of cohesion as a function of the free rider problem (Olson, 1965; Hardin, 1968).

The cooperative and indeed the sector as a whole has attempted to deal with the free rider issue through the introduction of differentiated farm gate prices awarded according to the farmers' involvement in cost cutting exercises such as every other day collections and the even allocation of total costs of distribution amongst members.[82] Yet these have largely

[82] Although it is worth recalling that incentives are given where farmers accept flexible collection times and every other day collection

served to exacerbate the problem still further, stimulating younger and often less peripheral farmers to question the costing system delivered given the location of their farm; an interesting take on the *Horizon problem.*

It could be argued that the cooperatives have shouldered the on-farm allocative inefficiencies of less well located farmers and a higher burden of infrastructure costs than non-cooperative dairy companies[83].

In contrast, both SGT and YFLM members experience limited loss as a result of asset specific investment. In the case of SGT, this is simply because off farm investment is negligible, whilst in the case of YFLM, the nature of how the farmer is paid and how fees are charged means that the member's attention is not drawn to their loss. Findings within the two case studies also support the idea that small cooperatives such as YFLM and SGT tend not towards high indirect costs of cohesion. It has been argued both in the literature and exploratory model that cohesiveness in smaller cooperatives is a consequence of the observability of members leading to lower costs of cohesion (Olson 1965; Riesman, 1990). The theory suggests that smaller cooperatives are more likely to be sustained than larger ones. There may be occasions when this is true, but this research offers an alternative explanation. Findings within YFLM and SGT suggest that there is limited internal free riding, but that this is not, as noted earlier, a function of ease of visibility of member actions.

[83] Both cooperatives First Milk and Milk Link have taken this role

The area of interest within these two case studies is that low transaction and agency costs are more a function of, in the one case, the individuality of sanctions experienced by members (SGT members experience sunk costs as a consequence of PO status), and in the other the individuality and tailored alternative rewards or benefits (YFLM).

In particular, in the case of SGT, limited free riding is a result of the PO framework, where, if products fail to meet the retailer quality specification, the *culprit* individually bears the penalty costs. Members of SGT experience individual penalties for non-conformance, including costs of packhouse grading and additional transport costs. When they fail to meet retailer specification they also receive, as well as the additional costs associated with product returns, a lower farm gate price from subsequent buyers. This in effect is the process of individualising the costs of free riding, a mechanism which if does not remove the potential, at least removes the indirect cost to those members who conform to cooperative objectives.

There are similarities to be found in the case of YFLM, but here the limited indirect costs of cohesion are associated with a lack of coalition identity, which is a function of the personalised individualised service delivered to members by the cooperative. Because there is no overt common interest, and thus few monitoring and sanction costs, members remain loyal to the marketing acumen of the marketers that serve them. In both these two case studies size is an issue, in that the limited numbers allow for the individualism of rewards and retributions, rather than inhibiting their need as stated in the exploratory framework.

10.1.3 The iterative relationship between leverage and cohesion

In the context of both the literature and indeed the exploratory framework, the iterative relationship between benefits and cohesiveness has not been found to be evidenced in full, nor has it proved to be the only explanation. It is evident that there are other factors that have emerged as a consequence of cooperative action, as is explicit in figure 10.4.

As suggested by the exploratory framework, the ability to manage the free rider problem allows for the retention of members and cooperative cohesion. However, in both the smaller cooperatives it was evident that, while the management of the free rider problem has meant that there are low costs of cohesion, it is the recognition of the individual member's rationality rather than the delivery of benefits that has engineered the sustained presence of the cooperatives. The results show that it is the individualisation of the costs of cohesion in the case of SGT and the individualisation of the benefits received by members as in the case of YFLM that has maintained member loyalty. These results show clear evidence of calculative rational behaviour.

While the decisions made by members of both SGT and YFLM are calculative, the factors which have led to these decisions are different. In the instance of SGT, members have sunk costs or exit barriers, which increases their loyalty and thus cooperative cohesion. These sunk costs relate to any investment on their farms part funded by the Producer Organisation, which would revert to the cooperative were the member to leave. Such sunk costs ensure the survival of the cooperative despite the lack of benefits. Yet, contrary to the framework and

literature, the presence of exit barriers does not lead to greater benefits. In fact as will be discussed later, this case study suggests quite otherwise.

In the case of YFLM, the lower costs of cohesion are attained through meeting individual needs, but in meeting these, the cooperative could be said to offer benefits other than financial to its members. These benefits include support in the development of husbandry techniques, insurance against non-payment by abattoirs and early payment schemes. It is these schemes plus a high degree of trust in their marketing agent that result in member loyalty and the continued presence of the cooperative in the market. In other words it is the additional benefits supplied by the cooperative not the relationship between low cohesion costs and farm gate prices that has ensured the longevity of this cooperative.

Finally, in an examination of the position of First Milk, findings would also appear to diverge from those expected from the mainstream cooperative literature and exploratory framework. Whilst it might have been expected that the issues of free riding and member defection might have led to the collapse of the cooperative, this has not been so. The members' fear of free riding at First Milk has led to increasing inefficiencies associated with costly distribution structures and farm location. This is of interest as inefficiencies in cooperatives are normally associated with non-investment in physical assets both on and off the farm, poor management and over production (Olson, 1965). Olson expressed the problem as the risk that any increase in product prices would stimulate firms to increase the level of production, thereby leading to over production for the collective as a whole and, in consequence, a subsequent deflation of price. Here the deflation of price is a consequence

both of the asset specific costs associated with transportation and asset specific costs stemming from the strategies to reduce transportation costs.

However, more importantly in this context, counter to the exploratory framework, despite the high asset investment and indirect cohesion costs, the cooperative continues to serve its members. This is unexpected as it might have been anticipated that a cooperative that has failed to improve farm gate prices and suffers from a lack of cohesion would fail. It is apparent that this could happen, in that Dairy Farmers of Britain went into receivership in 2009.

In this instance, it would appear that First Milk does provide additional benefits in the same manner as YFLM, but that the principal reason for survival is that, given the remoteness of many of the milk fields and the rising costs of transportation, there are few alternative options. First Milk is, for many farmers, the best option in a problematic situation. High costs of cohesion should mean that the cooperative should not survive, but whilst many farmers have left the cooperative, the cooperative still serves a significant proportion of the Dairy farming community.

10.1.4 Further issues of non-excludability and its impact on the sector as a whole

Finally, it has been proposed that the cyclical relationship between cohesion and benefits means that the presence of a cooperative within the market can result in an external free rider problem. This is contrary to existing literature, which holds that the mere presence of a cooperative within a market has a positive impact on the price paid to all farmers within the

sector, an effect most commonly known as the *Yardstick Effect* (Sexton, 1990; Sexton, 1990; Gunnerson, 1999)

In this current study, the external freeriding can be seen as an issue in a number of ways, with both negative and positive implications for the members and farming sector as a whole. One of the critical findings relates back to the point made that where the cooperative is unable to deliver farm gate prices to members then this may undermine integrity/cohesion, and where a cooperative fails to maintain cohesion then this may inhibit the delivery of benefits.

In an examination of the factors affecting the success of First Milk, it is apparent that the opportunistic strategies of rivals, who are actively poaching more attractive members from cooperatives, increase the burden of costs for members and thereby deflate farm gate prices. As previously discussed, the act of poaching in the dairy sector has meant that the key non-cooperative dairies are able to reduce their own costs of collection, but at a cost to First Milk members, who proportionally incur higher costs of collection and transportation per unit of milk.

Furthermore, while non-cooperative liquid dairy firms may offer for all year round production, the greater proportion of the cost of balancing the seasonality of milk supply would appear to be carried by the Dairy cooperatives, including First Milk. This has the net effect of increasing marginal costs and thus reducing net benefits for members, resulting, eventually, in a decline in price for the sector as a whole (Olson, 1965).

Much research has extolled the value of the yardstick effect (Sexton, 1986; Sexton et al., 1987; Hoffman et al., 1997). It has been generally held that the *yardstick effect* is a mechanism that generates higher returns to farmers without passing on the cost to the consumer (Sexton and Sexton, 1987; Hanson, 1996; Peterson, et al., 1996). Such work, however, fails to recognise the potential negative impact of the *yardstick effect* that can emerge where producers supply highly contested markets, as purported in this research. Findings imply that this is the particular event which emerges from the presence of SGT within the topfruit sector. Being the smallest cooperative and their inability to negotiate against the category leaders for Sainsbury's has the net impact of undermining the negotiating position of other top fruit suppliers within the sector.

Additionally, findings also suggest counter intuitively that small cooperatives may influence the price for the sector as a whole. In the case of YFLM, this is a function of its ability to act as a market balancing mechanism and balance volume. However, over the longer term, their presence within the sector can be seen to reduce the burden of cost for competitors, thereby driving prices down over time in a highly contested sector supplying a concentrated retail sector.

The ability of buyers to place pressure on farm gate prices is enhanced by the freely published and often misleading data on costs of production. The devolution of the costs of defective infrastructures by which non-cooperative firms are included in the costs of servicing remote areas or areas with few surviving farms is an interesting area of the free rider problem, which is in effect damaging to the sector as a whole. These examples are

clearly illustrations of calculative behaviour and are particularly evident in the dairy sector, but reiterate the perspective that the calculative rational decisions is one where benefits may be attained without the costs.

The failure of the existing literature to consider negative impacts on prices may be attributed to a lack of consideration of the impact of imbalances of power within the supply chain. Where there are highly contested interfaces between consumers and purveyors of food, a highly consolidated and contested retail sector/purveying food to consumers, there is an impact not solely on first tier suppliers but also on second tier suppliers. In conflating the continued existence of the cooperative with its ability to operate at a competitive advantage with head to head competition, there is a failure to recognise that the presence of a cooperative in the market might be for some quite other reasons (Cook, 1995; Hanson, 1996; Hind, 1997; Hardesty et al., 2004).

The case studies show that the survival of the cooperatives is a function of rational economic decisions by members, but also show that the cooperative needs to deliver benefits over and above farm gate prices, particularly in contested markets. In a situation where the sector is in considerable decline, the cooperative appears to be ballast, and stays the erosion of the farming community, at least in the short term. It can also be said that the cooperatives' survival could in financial terms have a negative impact on prices received. This is because the rational solution for non-cooperative firms is that they should seek to undermine the cooperative.

10.2 Implications of discussion for the theoretical framework

Whilst much of the exploratory theoretical framework has proved useful in the examination of the case study, there are complexities that have emerged from the research as set out in figures 10.2 and 10.3. While the findings from this research show little inconsistency with much of the exploratory framework, in that while the cooperatives in question were not able to improve leverage and the relationship between lack of cohesion and leverage did not present itself in the manner articulated, nonetheless there has been nothing within these findings to suggest that there is no relationship between improved leverage and the attainment of financial benefits for farmers. Furthermore, observations were not inconsistent with the idea that the success of a cooperative was contingent upon the ability to ensure cohesion. Nor was there anything observed that suggests that there was an iterative relationship between cohesion and leverage. However, the research did find that there were other reasons as to why a cooperative may continue to trade. It was found in the examination of the three case studies presented within this thesis that either sunk costs or the belief that the cooperatives were better than alternatives meant that members remained loyal despite the failure to deliver financial benefits.

10.2.1 Leverage

On one level, the findings demonstrate that for the most part the three cooperatives have failed to deliver real price improvements to farmers, with the possible marginal exception of YFLM. The cooperatives appear unable to increase scarcity for or motivational investment

of buyers, because of the persistence of power imbalances, despite coalition formation and the development of added value products. Yet these findings do not fundamentally refute the position that cooperatives who are able to effectively close the market through coalition formation or motivational interest can become an effective counterweight against more concentrated downstream markets; it simply suggests that in the market examined the traditional cooperatives examined have failed to do so. The research does not claim, therefore, that there are no circumstances that would allow cooperatives to attain leverage, but it does suggest that a proposition for future research could be:

- Where cooperatives are able to improve leverage higher financial benefits can be delivered.

10.2.2 Cohesion

Furthermore, it is apparent that cooperatives can be seen to avoid problems of free riders. Current literature has particularly focused upon suggesting ways in which cooperatives can adapt their governance structure in order to promote cohesion and avoid free riding problems, particularly those associated with decision making, ownership and coherence of objectives[84] (Porter et al., 1987; Cook, 1995; Bijman and Ruben, 2005). Indeed, it is evident that producer organisations were developed in order to redress the impact of free rider problems on the coherence of objectives, through the provision of a measure to ensure cost effective investment.

[84] influence, control, horizon and portfolio problems

This research does suggest that whilst cohesion is a necessity in cooperative action, cohesion can be better attained where the focus is on the individual interests. This is more feasible in smaller cooperatives. Cohesion is less attainable in larger cooperatives, and it does appear that there is causal relationship between free riding, cohesion, and longevity. In First Milk, where there is greater potential for heterogeneity in members' interests, internal free riding and thus cohesion may have an impact on the cooperative longevity. This reflects the key literature, where Olson suggests that cooperatives exist to further the common interests of their members and will "perish" if they fail to do so (Olson. 1965 p. 6-7). This suggests the following proposition:

- the effectiveness of cooperatives is linked to the ability of cooperatives to sustain cohesiveness

10.2.3 The interrelationship between leverage and cohesion

Finally, the exploratory framework suggested that there was an interrelationship between the cooperative cohesion and the ability of the cooperative to attain leverage against multiples: a process that was seen to be iterative. In earlier chapters it was suggested that a lack of financial benefits would drive the decline in cohesiveness of the cooperative with the increased risk of the disintegration of the cooperative and furthermore, that a lack of cooperative cohesion would lead to the inability of the cooperative to generate financial benefits. Again, in this instance the research did not find anything to refute this position,

indeed the evidence found within the First Milk case study supported such a relationship; however, all three of the three case studies suggested other reasons as to why the cooperative was sustained. In the light of these findings the following propositions are proposed:

1. Cohesive cooperatives may deliver increased benefits
2. Cooperative able to deliver leverage through coalition formation and/or motivational investment may become more cohesive
3. The loss of benefits does not automatically lead to a reduction in cooperative cohesion
4. Cohesion can be maintained as a consequence of:
    - The delivery of other benefits
    - Scarcity of buyers
    - Exit or Sunk costs

10.2.4 Cooperatives and the external and internal freeriding – the Yardstick effect

It is also of importance that this research shows a level of interconnectivity and permeability between the cooperative and its environment, in a manner which extends beyond traditional precepts of the cooperative as a "pacemaker" or "yardstick". This research indicates that because of the levels of contestation within the market, cooperatives can have a negative as well as positive impact on prices. The proactive initiatives in two of the cooperatives, YFLM and First Milk, have the effect of increasing prices in the short term that improves prices for

the whole sector. As a consequence, if buyers then seek to find either alternative, cheaper suppliers, as in the case of YFLM, or to redistribute costs and reduce benefits to members, as in First Milk, price rises are swiftly followed by a price decline. In such circumstances it is problematic as to whether there would have been an even more marked deflationary impact on industry prices if the cooperatives were not in existence. This leads to the following proposition:

- The failure to exclude rivals from receiving benefits without bearing the costs undermines the ability of the cooperative to maintain both benefits and cohesion.

10.2.5 Summary of the previous sections

The discussion in the last three sections postulates that the relationship specified between dependent and independent as expressed within the original exploratory framework is incomplete. Whilst it is apparent that cooperatives are not necessarily able to deliver improve farm gate prices, or indeed maintain cohesiveness, this has not led to their demise in the three case studies examined. This is of particular interest in the context of existing literature that suggests that *traditional* cooperatives are particularly vulnerable, due both to the constraints placed on their access to external capital for investment, a particular hindrance in increasingly contested markets and their higher risk of free riding. These findings however suggest that cooperatives are able to survive over the long term even where they are unable to increase leverage, and even where they are not cohesive. This does not refute the position that success in cooperatives is a consequence of their ability to deliver leverage and operate

cohesively. Furthermore, it fails to find evidence to suggest that there is not a causal relationship between cohesion and any attempt to improve leverage.

10.3 Developing propositions and hypotheses

The findings of this research suggest that farmers make calculative rational decisions on the value of cooperative action, based on the extent to which benefits are in excess of asset specific, agency and transaction costs and of the risks of free riding from parties inside and outside the cooperative. As a consequence, the ability of the cooperative to perform depends on complex causal relationships between the generation of improved farm gate prices, non-price benefits, actions of competitors, head-on-head competition and cooperative cohesion.

The cooperatives in this study continue to trade and maintain membership despite a persistent failure to improve farm gate prices, a situation that in one case seemed to be caused, ironically, by the benefits obtained from individual services provided by the co-op managers. Suffice to say, the study has made it clear that there are other benefits, aside from the government's hoped for improved profits from increased leverage, that allows cooperatives to continue to trade. In this respect, the Government policy seems to be a failure, but the cooperatives in this study have survived the failure.

This means that the earlier causal diagram found in figures 4.2 and 10.1, as also seen in the leverage/free rider matrix figure 4.1, needs some revision. Figure 10.5 show these revisions and that there are additional relationships to consider. First, as highlighted above, leverage is

not essential for the survival of the cooperative. Second, it is apparent that free rider problems do threaten co-ops, but can be eliminated or reduced in smaller cooperatives where service is personalised. Third, two clearly new dimensions to the framework are that both leverage and cohesion can be undermined by the intervention of competitors.

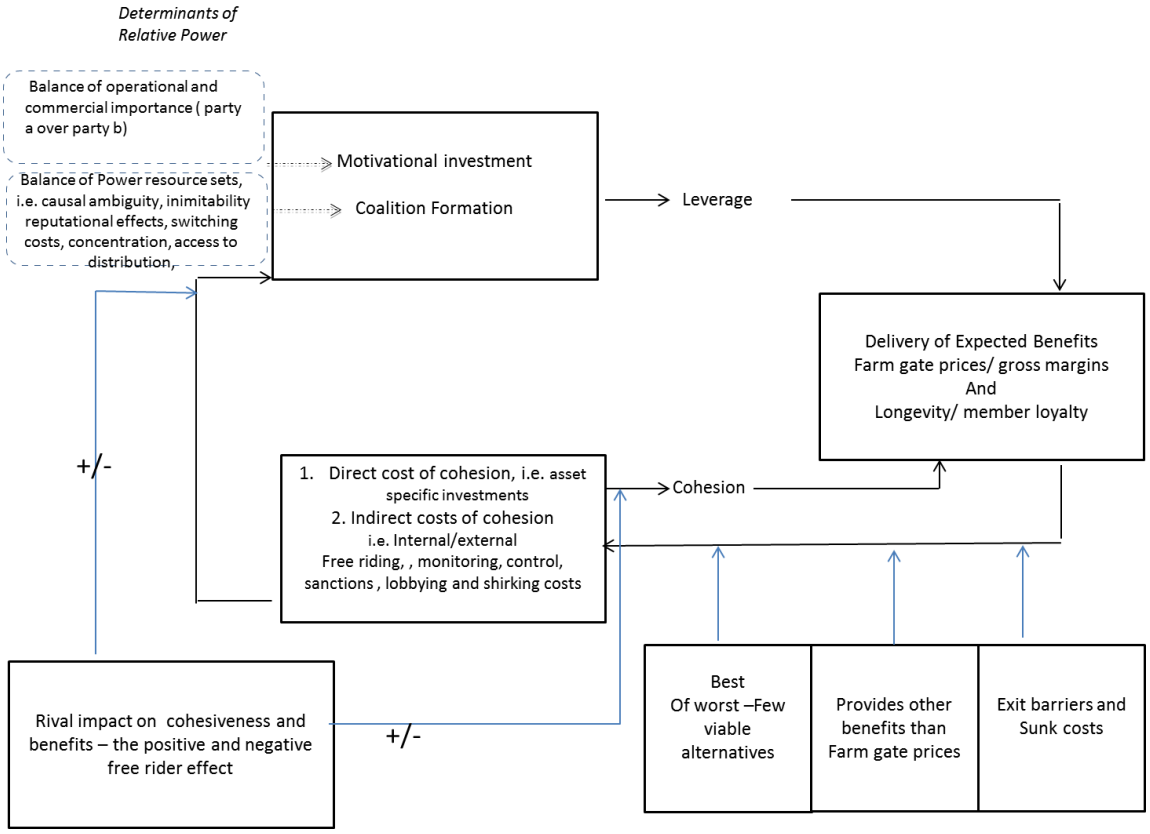


Figure 10.5 revisions of original framework

What is notable is that cooperatives can lack cohesion and leverage and not disintegrate, as suggested in chapter 4. Nor is there any real indication that where there is cohesion and no leverage, or leverage and no cohesion, this will cause co-ops to fail over the longer term.

However, it does seem to be the case that when cooperatives are larger, where there is greater heterogeneity and highly contested buyers' and competitors' markets, requiring the development of added value products, there is a greater risk of loss of cohesion and failure.

The research, therefore, leads to the following propositions:

Proposition 1

- Where cooperatives are able to improve leverage higher financial benefits can be delivered.

Proposition 2

- The effectiveness of cooperatives is linked to the ability of cooperatives sustain cohesiveness

Proposition 3

- Cohesive cooperatives may deliver increased benefits
- Cooperative able to deliver leverage through coalition formation and/or motivational investment may become more cohesive
- The loss of benefits does not automatically lead to a reduction in cooperative cohesion and can be maintained as a consequence of:
    - the delivery of other benefits
    - best of possible options
    - sunk costs

Proposition 4

- The failure to exclude rivals from receiving benefits without bearing the costs undermines the ability of the cooperative to maintain both benefits and cohesion.

10.4 Conclusion

Policy makers have emphasised the value of cooperatives as an alternative to direct intervention, but the failure to address the apparent limitations of this policy will result in the continued erosion of the farming sector, with the consequent implications for food security in the UK. There is a clear need for the inability of cooperatives to act as an effective balancing mechanism to be fully understood and for more effective instruments for the promotion of the UK agricultural sector to be developed.

This research has put forward an explanatory model for further investigation as derived from the exploratory framework, which has provided an interesting basis for initial research. In addition to the contribution the research makes to both the theory of cooperatives and theories of power relations in contested environments, it provides the basis for further research, which may lead to insight into a more effective way of managing the development of the increased market orientation of the farming sector. Under the rural development programmes the government has emphasised the cooperative form as an instrument through which additional value is gained: either through greater efficiencies in existing relationships with buyers and/or in the development of new markets.

The government is inferring that coalitions, accompanied by a strategy of improving productivity through education and benchmarking, may result in a shift in power/dependency dynamics and will enable the withdrawal of residual direct support instruments such as Single Farm Payments. However, the delivery of benefits to farmers is contingent upon the ability of the cooperative to increase leverage, either through increasing scarcity or through the development of added value products that prove to be of operational and commercial importance to the buyers. This research has questioned the idea that either of these two expectations is realistic. Indeed, the persistence of cooperatives in the longer term would appear to be a function of their delivery of alternative benefits which cannot realistically over time sustain the farming sector. The policy, therefore, is at best an irrelevance, at worst a distraction from the need to consider more realistic policy options. Such policy options could include measures that focus on the development of a more effective transportation system. However, a measure which would be of benefit to farmers would be effective action by the Competition Commission in order to break up the working monopolies present downstream within the UK food supply chain.

In terms of the exploratory framework that states that cooperatives will collapse if benefits are not attained, this research finds that, while farmers do make calculative rational decisions in order to maximise their own utility, there is an over simplistic assumption that all benefits may be measured in financial terms as above normal profits. Findings demonstrate that for the most part the three cooperatives have failed to deliver financial benefits to farmers, but they continue to survive as a result of additional services delivered that have an impact on net margins.

The next chapter will examine the limitations of this research and provide more in-depth recommendations as to the nature of future research in this area.

CHAPTER 11-

LIMITATIONS, CONTRIBUTION AND RECOMMENDATIONS OF THIS RESEARCH

11.0 Introduction

This chapter is to examine the limitations and recommendations for further research. In the first instance, this research has examined three cooperatives that are largely characterised by their similarity to *traditional* cooperatives. Since the execution of this research there have been a greater number of start- ups of cooperatives within the UK, as supported by the EFFP, that are operated under more relaxed rules of ownership, and democracy. This chapter first explores this as a key limitation and the implications of this and other limitations in terms of the contribution to knowledge of this research. The chapter concludes with insights into the main areas of contribution and the recommendations to extend this line of enquiry.

11.1 The limitations

There are a number of limitations of this research, the identification of which will form the basis for the proposals for further research.

In the first instance, this is exploratory work and whilst there are some important insights delivered here, this offers no potential for generalisation across either the UK or other

market contexts. Further research should be conducted to examine and test the propositions put forward in the discussion chapter of this thesis, and it suggested that this could be expanded to look at other commodities in the UK as well as cooperatives operating in other national contexts. In this research, despite the care in the selection of case studies, in all cases, cooperatives failed to deliver benefits, but survived. It would have been of interest to find cooperatives which were successful on both counts or to the contrary that had failed on both counts and disintegrated. Attempts were made to conduct research with Dairy Farmer of Britain stakeholders but there was considerable reluctance by parties to contribute to the research.

This suggests another key limitation of this research. The research focus is on three cooperatives that have much in common with *traditional* cooperatives. At the start of the research in 2006, the development of *Entrepreneurial* cooperatives as seen and researched in mainland Europe, and US cooperatives, was underdeveloped in the UK. Much of the research into *Traditional* cooperatives pointed to the difficulties experienced by cooperatives in two aspects - their ability to raise sufficient funds for mergers and acquisitions, and their speed of decision making where members retained or indeed were able to take advantage of their democratic rights.

Key authors in the US and in mainland Europe, have argued that cooperatives will be able to generate more efficient sources of funds if they adopt one of a number of forms of *Entrepreneurial* cooperatives that have emerged over recent times (Cook, 1995; Van Dijk, 1996; Cook and Tong, 1997; Nilsson, 1998; Nilsson, 1999; Van Bekkum, 2001). It is held

that there are at least 4 types of cooperatives, namely *PLC cooperatives* and *cooperatives with proportional tradable shares*, both of which offer tradable shares to members, and *participation shares cooperatives* and *subsidiary cooperatives*, both of which offer shares to non-members [85](Van, Bekkum, 2001). Van Bekkum extended the ideas to suggest that the choice of form of *entrepreneurial* cooperatives could be contingent upon market structures in which they were located.

In the light of the findings here it would be of value to examine the nature of the different forms of cooperative and their ability to deliver benefits to members (Nilsson, 1998: Van Bekkum, 2001). This thesis, because of the available cases, may not have examined whether new forms of cooperatives are able to generate leverage. Existing literature argues, in the context of *Entrepreneurial* cooperatives, that the presence of tradable shares offers cooperatives much more scope for economies of scale and scope. This, it is argued, is a consequence of their greater freedom to raise investment funds. In the case of *PLC cooperatives* and *cooperatives with proportional shares*, where they are able to raise additional funds through offering supplementary, tradable and appreciable shares to members, the so called "B" shares, this is seen to inhibit both the *Portfolio* and *Horizon* problem and members of these cooperatives experience no sense of loss of benefit. Similarly, *participant share cooperatives* and *subsidiary cooperatives* are able to trade shares on the open market, and thus the division between users, beneficiaries and control are seen to eliminate the free rider problem (Nilsson, 1998; Van Bekkum, 2001). In both

instances they represent a separation between on-farm and off-farm asset specific investment which reduces the impact of the common property problem. While *Entrepreneurial* cooperatives are relatively new to the UK and not evident at the time of this research in the UK, the lack of consideration is a limitation and a study of them would provide greater insights into the leverage problem. It is of interest to note that existing research on non-cooperative firms holding equivalent shares of the market have failed to redress power imbalances (Cox, et al., 2005; Hingley et al., 2005).

A further claim within the literature is that cooperatives are more able to perform where they offer closed membership. This is because they address the issue of the free entry of non-members into the cooperative who exploit the high farm gate prices generated by the countervailing weight of the cooperative and in so doing, reduce the impact of excess volume available for supply on the overall price. This again is a *Horizon* problem. Closed members is a further feature of certain types of *Entrepreneurial* cooperatives, however, current findings although not generalisable, have suggested to the contrary, specifically in the case of SGT, a closed member cooperative. Nonetheless, there is further more explanatory research that could be undertaken. This thesis, does nonetheless offer the basic framework through which further research could be undertaken for the purpose of expanding this area of inquiry.

11.2 Recommendations for future research

In the first instance, as suggested in the previous section, there is a need to extend this research into other countries, commodities and markets. This is particularly pertinent as there is an apparent initial interest in the financial performance of *Entrepreneurial* cooperatives (Lerman and Parliament, 1990; Kalogeras et al., 2005; Nilsson et al., 2012; Kalogeras et al., 2013), with much of the relevant work published following the first submission of this thesis for examination.

Further to the main findings of this research, there are other key aspects which might prove to be of interest to researchers. This research suggests that simply promoting cooperatives may not effectively support farmers. A change in tack may be particularly necessary if further research supports the preliminary findings of this thesis, namely:

1. that cooperatives may not necessarily be able to improve farm gate prices

2. cooperatives serve other purposes than improving farm gate prices and gross margins

3. cooperatives can serve to deflate industry price and can have a negative impact on food security and the sustainability of the sector as a whole

It could be suggested that there is room for research into the nature of farm business support and national infrastructure. It is critical that the distribution of costs to farmers that are

incurred from the current infrastructure be re-evaluated in the light of the competitiveness of the farming industry. This is apparent particularly in the case of transportation systems, where farms are located away from the major centres of population and there has been little investment in more cost effective forms of transportation since the 1960s' decision to shift from rail transport to road, following the Beeching Report. This line of research is in keeping with the ethos of the interdisciplinary strategy launched by the UK government in 2010 (UK Cross-Government Food Research and Innovation Strategy, 2010)

11.3 Conclusion

The chapter has highlighted the limitations of the research, in that at present it is an exploratory piece of work from which further research can be conducted. It suggests that following the submission of this work, a programme of study should be undertaken that tests the theory derived from the exploratory framework over a large number of cooperatives. It is felt the scope of the research should be extended, not only to consider traditional cooperatives but also the emergent entrepreneurial cooperatives. This chapter also suggests that there are signs that this research could have broader implications for government regional development policy beyond agriculture alone. The next chapter, chapter 12, concludes this thesis.

CHAPTER 12- CONCLUSION

12.0 Introduction

In this thesis, research has been undertaken in order to examine whether cooperative actions may deliver improved profitability in agriculture. The research has examined cooperative literature and determined two key strands that attempt to examine the nature of cooperative success. On the one hand the research draws upon a *Power Dependency Theories* which does not, hitherto, appear to been applied to the problem of the effectiveness of agricultural marketing cooperatives as mechanisms to redress power imbalances (Emerson, 1962). On the second, the research draws upon common property literature (Olson, 1965; Hardin, 1968: Cook, 1995), which constitutes a more significant body of literature and examines the implications of cooperative governance structures on longevity and cohesion. These bodies of literature are drawn together from which it is recognised that there are few considerations of the relationship between cooperative cohesion and its ability to deliver literature in current research.

On the basis of the evidence drawn from the literature review, this research has developed an *A priori* exploratory framework in order to examine the factors affecting the success of the cooperative governance form. The research attempts to reveal the "real" event, and combines content, thematic and comparative analysis to examine the findings from interviews, published and unpublished data. On the basis of this research, a theoretical framework has been developed for future testing.

However, prior to that testing, this research suggests in a preliminary way that there are further lessons to be learned. Inherent to the explanatory framework is the idea that even where farmers collaborate they attain insufficient power attributes to counter power imbalances when faced with the highly concentrated and contested buyers' markets. These findings were consistent across the three cases examined. While the research at this stage is merely exploratory, there may be greater implications of this research but this would require a wider study of cooperatives across diverse market structures, commodities and countries.

Interestingly, these findings are comparable to those of earlier studies in power and dependency that examined the balance of power in the retail sector, but where cooperatives were not the focus of attention, which lends further credence to these results. The research corroborates the point made in that earlier research that it is the distribution of power attributes between exchange parties that determines the balance of power.

It further suggests, though, that the endurance or longevity of cooperatives is not simply a function of the delivery of financial benefits in the form of farm gate prices, but the delivery of individual needs for members. There are non-leverage benefits of co-op membership and in some cases these are supplemented by the fact that members' other options outside the co-op are less than attractive. So members demonstrate clear calculative behaviour, but the calculation is regarding non-leverage benefits.

12.1 The exploratory model and the research method

The exploratory model suggests attainment of leverage through motivational investment or coalition formation and cooperative cohesion as demonstrated by member loyalty and cooperative longevity are critical to cooperative success. The model also suggests that this is an iterative problem that stems from the interrelation between leverage and cooperative cohesion. The issue is to what extent the model aids understanding of the factors affecting cooperative success. This research was conducted through a case study methodology, which is seen to be of particular value in the examination of ***what*** questions in exploratory research (Yin, 1994). Case studies have the further advantage of enabling multi-perspectival analyses and holistic in-depth investigation of a phenomenon, using multiple sources of data (Feagin et al., 1991; Yin, 1994 p. 23; Stake, 1995).

The three cooperatives selected might best be described as *Traditional* agricultural marketing cooperatives, in that members technically held the rights of ownership, decision making and, with the exception of YFLM, the earnings or surplus generated by the cooperative (Barton, 1989). Furthermore, investment income was not attained through offering members B shares or attaining funds from external investors. Nonetheless, some of the cooperatives' principles had been relaxed in each of the cooperatives selected. This is particularly so for SGT which operated under a closed membership policy.

The choice of cooperatives as case studies in this exploratory study was primarily in the interest of research validity and availability at the time of the research (Eisenhart, 1989; Yin,

1994: Merriam, 1998: Gerring, 2007). Availability was a particular issue in the selection of *Traditional* cooperatives as cases rather than the *Entrepreneurial* cooperatives which were rare in the UK at the start of this research. Further constraints were that the researcher failed to elicit responses from cooperatives located in the "sudden death" quadrant of the leverage/cohesion matrix, illustrated in figures 4.1 and 12.1 (see below), and failed to find any cooperatives delivering leverage and cohesion, as illustrated in the "successful" quadrant, which would have enabled further triangulation of findings.

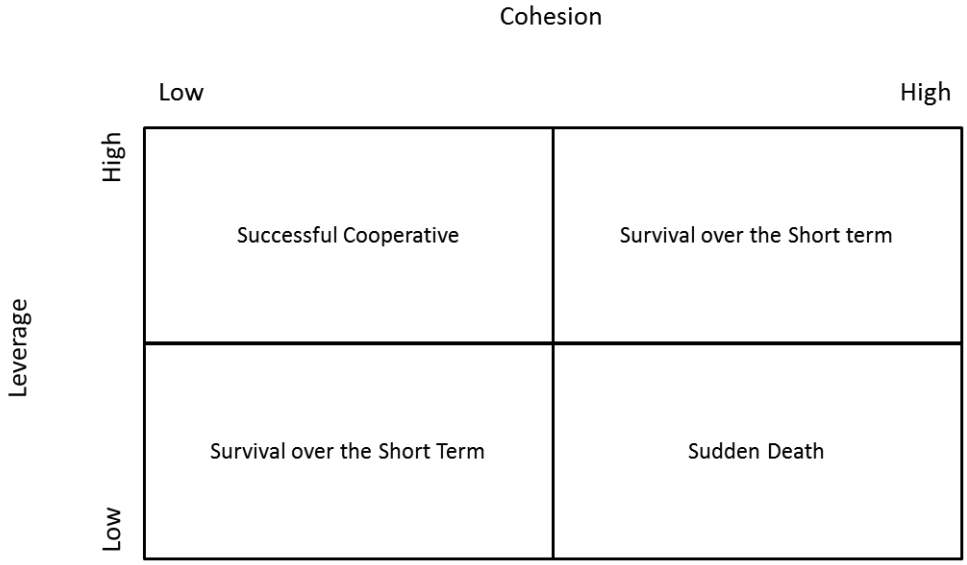


Figure 12.1 the potential outcomes: the leverage/free rider matrix

Nevertheless, the researcher has given much consideration to issues such as the number of case studies, the unit of analysis, methods of data collection and data triangulation, each of which have been identified as critical factors in case design (Eisenhart, 1989; Yin, 1994). This research has chosen to undertake three case studies, with the view, despite the constaints, that multiple case studies are often considered more compelling and more robust

and are also based on two units of analysis, in line with the interpretation that the cooperative is both a collective of individual firms as well as a firm in its own right (Herriot and Firestone, 1983; Yin, 2009).

12.2 The results and potential impact

The results tend to suggest that there are distinct characteristics specific to the products, to their price and demand sensitivity, which is magnified by both the downstream industry structure and the pricing strategies, deployed by the abattoirs, dairies, and top fruit category managers. In highly contested markets, where retailers are able to place pressure on intermediaries and even though farmers were under contract, the cooperative was unable to lever greater value for its members.

The research was interested primarily in the development of a theoretical framework that could be used in future research to examine the ability of cooperative action to redress the problems in the UK farming industry and to what extent it could realistically replace traditional sector support mechanisms. The findings of this research have placed a serious question over the ability of cooperatives to deliver in the context of a highly competitive market place. This is an issue of particular significance to self-sufficiency in the UK, whilst food security at a global level is apparently an increasing issue in a world with a population of over 7bn (Real world statistics, 2013). Improved market orientation through cooperative actions is seen to be critical in maintaining an effective and efficient farming sector and thereby ensuring self-sufficiency and food security.

Many have alluded to the success story of New Zealand. In 1984 New Zealand introduced policy reforms in agricultural policy that reduced support from 30% of the value of production to currently circa 1% and facilitated a growth in production of circa 2.5% per annum (Gilmour et al., 2007). This, it is suggested, is proof that agricultural markets do adjust themselves where subsidies are removed. Research findings suggested that whilst farmer incomes declined after the reforms over a six year period, these readjusted (Le Heron et al., 1999). This is, in part, a consequence of the proximity of New Zealand to the major growth economic growth areas of Asia and China in particular.

Since the GATT agreement, the UK government has sought to increase market orientation, and gradually to erode direct support. Unlike farm gate prices in New Zealand, prices in the UK have failed to readjust and, at best, have remained static. The distinction between the two countries can be attributed to the population size, marketing channels, more extensive access into international markets, and the improved leverage position experienced by New Zealand due to a less contested and consolidated customer base (Bijman, 2010; Cavicchi, 2010). Yet perhaps there are further questions to be raised. Where benefits are defined in terms of farm gate prices and farmers gross margins, it may be appropriate to ask, on the one hand, whether these results are generalisable across all product sectors, cooperative forms and countries.

12.3 Contribution to Knowledge

Nonetheless, this research offers some contribution to knowledge in a number of literature strands, including those of Cooperatives and Power and Dependency

In the first strand, that of literature on cooperatives, the research contributes to two areas of the issue of cooperative success; on the one hand, the value of the cooperative as a counter lever to downstream power.

In the context of leverage and power, some of the findings in this thesis would appear to be in line with the limited research into the issue of leverage and the ability of cooperatives to improve farm gate prices, particularly in the context of contested and competitive markets (Guillouzo, 2003; Cook, 1995; Hanson, 1996; Hind, 1997; Hardesty et al., 2004). One key issue raised by this study's findings, which has been discussed in earlier research, is that the ability of the cooperatives to improve leverage is jeopardised when they are faced with the opportunistic behaviour of competitors; this is particularly so where there are sanctions imposed on the exit of members, as in open membership cooperatives (Cook, 1995; Hansmann, 1996).

In line with previous research, this work produces some evidence to support the idea that even where the cooperative is able, over the short term, to have control over the volume delivered by members, their position is open to exploitation by external parties. Literature on cooperatives has pointed to the relative benefit of open and closed cooperatives, their implications and the impact on monopsonistic rents and market power (Youde and

Helmberger, 1966; Van Bekkum, 2001; Russo et al., 2011). This research corroborates their work in that it suggests that the success of cooperatives can be attributed to their ability to control aggregate supply when faced with horizontal competition (Cook, 1995).

However, a real contribution to knowledge of this research is in the application of *PDT* in a more rigorous evaluation of the market power and the success of cooperatives to improve leverage. *Power Dependency Theory* argues that coalitions are a key mechanism to adjust power imbalances. However, the concept has not until now been used to examine the cooperative problem. *PDT* suggests that cooperatives can potentially improve the financial position of farmers by increasing motivational interest and/or reducing the number of alternative sources of supply. Theoretical constructs based on *PDT* have been used to examine the distribution of power in B2B exchange relationships, but not explicitly in the context of agricultural marketing cooperatives and the ability of "coalitions", as proposed by Emerson, to redress power imbalances (Emerson, 1976).

Researchers have expressed concerns as to the ability of the cooperative form to improve the leverage position of cooperatives, whether through consolidation or the development of added value products in current markets (Staatz, 1987; Fitter, 2001; Goodhue et al., 2011), but research has tended to be limited, particularly in the context of improvements to margins through added value products. The present project has attempted to address this research gap and offers an explanatory framework through which further research could be delivered.

In addition, the research has contributed to a second strand of literature, that of the expanding literature on governance and power in exchange relationships and literature on

power in B2B relationships (Cox et al., 2005; Cox et al., 2007; Hingley, 2005; Hanf, 2011). There is further, more extensive research to undertake, but this work offers as an outcome of the research an explanatory model for future investigations. A further contribution to knowledge, which again needs further investigation but is nonetheless interesting, relates to the issue of free riding and in particular the issue of the Yardstick effect. The Yardstick effect is normally considered to stem from the presence of the cooperative in the market place and is seen to increase competition for supply in marketing agricultural cooperatives and thereby have a positive impact on farm gate price (Sexton, 1990; Gunnersson,1999). Whilst the results tend to support this position, they also suggest that in highly contested markets, Yardstick effects can also have a negative impact on prices as competing parties seek to undermine their rivals' market position.

These results can be also seen to contribute to the body of literature on cooperative cohesion and longevity, in that they suggest that a cohesive cooperative does not necessarily lead to improved leverage, but that the lack of cohesion and the fulfilment of individual goals can in fact lead to the collective good. This finding appears to be a ramification of the Yardstick effect, and would seem more in line with the principles found in classical and neoclassical economics than with the "logic of the commons". The consequence of the relationship between cohesion and delivery of the common good is that a lack of cohesiveness does not necessarily lead to the death of a cooperative.

This is apparent even where they fail to deliver consistent improvement to farm gate prices. Where members are not hostage to the cooperative, the longevity of a cooperative appears to

be influenced where the firm offers additional benefits and support. This is of interest in that many have questioned the value of cooperatives as a governance structure and have emphasised the importance of increasing internal cohesion for the delivery of differentiation strategies and other initiatives (Cook, 1995; Van Bekkum, 2001).

However, it is also important in relation to the import attributed to the development of mechanisms to increase the cohesiveness of effort by examining the implications of member trust and loyalty and coherence of objectives (Staatz, 1989; James et al., 2005). Indeed the research also contributes to a further body of literature that has suggested that there is a need for a severance between ownership of cooperative assets and of individual farm assets (Nilsson, 1999; Van Bekkum, 2001). This is because in each of these bodies of literature there is a suggestion that the barrier to implementing a strategy to increase the competitive advantage is the conflict between individual and collective goals; this would suggest that where it is evident that there is a divergence between the collective and the individual, as evident in research that proposes Entrepreneurial cooperatives (Nilsson, 1999; Van Bekkum, 2001), there is room for a looser association. Again there is room for further, wider investigation into this issue.

Finally, it is perceived that the findings of this research tend to suggest that at a policy level there is a need for reconsideration of the support infrastructure for farmers. The consideration of the infrastructure should include not simply the role of the support bodies but also the nature of transport infrastructure and its implications for a viable farming sector.

The rationalisation of the railway structure, following the Beeching report, has resulted in the loss of a competitively priced transportation system. If UK rural areas are to continue to play an important part in the provision of the nation's food supply, then the cooperatives may be able to play an important role. However, in this role, it is not possible that they should continue to absorb structural x-inefficiencies arising from the location of a farm and continue to support the farming sector.

If the UK farming industry is to become competitive, there not only needs to be a more cost effective transport infrastructure, but also greater ease of access to distribution systems other than those dedicated to the major retail chains. However, it is perhaps also important to recognise (Clark, 1952) that whilst governments believe that cooperatives have the capacity to be competitive within the market, they fail to acknowledge that cooperatives are not able to achieve sufficient allocative efficiency where the objectives of maximising farmer welfare and maximising consumer welfare are in conflict.

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Appendix A 1 – Measures of data

Figure A1.1. Showing measures for Utility demonstrating degrees of intensity

Measures of Utility			
Attribute measured	Basis for measurement	Intensity	Sources of data
Operational importance (buyer)	Proportion of overall spend of the buyer to supplier Proportion of overall spend on the category Technical and Human skills Networks	Consideration of proportion of spend – over 50% high Below 20% low Number of suppliers 1-3 (high op importance) 4-9 (medium) Below 10 – low Switching costs -	Interviews with cooperatives , Journal articles, other published data
Commercial importance (buyer)	Proportion of overall revenue generated through product Perceived importance by the buyer of product portfolio	Tacitness, specificity and Complexity (where high – these are products which are unique and bespoke, and contribute much to revenue generation	
Operational importance (supplier)	Value of the buyers business – over the long and short terms	Consideration of proportion of spend – over 50% high Below 20% low Number of suppliers 1-3 (high op importance) 4-9 (medium) Below 10 – low Switching costs	Interviews with cooperatives , Journal articles, other published data
Commercial importance (supplier)	Implications for business growth	Potential growth in buyers' market	

Figure A1.2 showing measures for Scarcity

Measures of scarcity				
Attribute measured		Basis for measurement	Intensity	Sources of data
Market competition	Industry growth	Increases in share of Gross domestic product	Comparative increase with other businesses. High = a proportional increase of greater than 25% more than the average increase	Published data for historical and current triangulation with cooper competitors farmers and industry bodies Interviews with all stake holders Trade journals, industry bodies
	Exit barriers	Presence of government legislation, Investment costs etc.	High – severe losses incurred or exit inhibited, representing above 5-10% of annual operating budget	
	Diversity of competitors	Levels of specialisation of competitors	High = many specialists , more than 10 in the field	
	Concentration and balance	A HHI index	High above 25 – low below 10%	
	Switching costs	Levels of specific investment,	Proportion of business tied up	
	Brand identity	Perceived strength of brand	High value placed on brand – low not recognised	
	Product differences	Level of standardisation	Interchangeability of product, specificity of product, high only made for, low = standard	
	Intermittent capacity	Evidence of periodic supply	Presence of evidence of any bottleneck problem	
	Storage costs	Costs of holding stock – based on premises, use of energy technology, length of time needed to be stored	High – presence of all three, low	

Market contestation	Economies of scale	Share of output over time Expert knowledge of technology	Evidence of fall in share of output over time Data on investment of best practice technology	
	Proprietary product differences	Standard or customised	Bespoke or standard	
	Brand identity	brand identity	Significant presence within the market, - key association with product identity in mind of consumers	
	Switching cots	Levels of specific investment,	Proportion of business tied up	
	Capital requirements	Costs of investment for expansion or differentiation	Return on investment High – above average return on investment	
	Access to customers/ distribution channels	Dedicated supply channels	Evidence of dedicated supply channels in which there are apparent switching costs	
Availability of buyers	Product differences	Standardisation – levels of interchangeability	High products are easily interchangeable – choice entirely based on cost a	
	Distribution channels	Dedicated supply channels	Evidence of dedicated supply channels in which there are apparent switching costs	
	Switching costs	Levels of specific investment,	Proportion of business tied up	
	Concentration and balance	A HHI index	High above 25 – low below 10%	
	Corporate stakes	Potential for loss or gain of market share	Extent to which there is shifts in market share	
	Prices performance of substitutes	Comparison of prices of substitutes	High above the average prices Low lower than average	
	Switching costs	Levels of specific investment,	Proportion of business tied up	

Appendix A 3 Lists and schedules of interviews (highlighted to protect the interests of farmers and confidentiality agreement (see acknowledgements)

Top Fruit cooperative

	Date	Company	Location	Tape record number
Adrian Barlow 1st Interview	1st Feb 2006	English Apples and Pears	Telephone interview	Interview notes / not recorded
James Crowden	Feb 2006	Fruit specialist	Telephone interview	Notes – not recorded
Paul Hillman	Feb 2006	Industry specialist rural business advisor	Telephone interview	Not recorded
John Thatcher	March 2006	Thatcher's brewery	At the Brewery	Interview notes
Dan Keech	March 2006	Sustain	Telephone interview	Interview notes
Nigel Jenny	April 2006	Fresh produce Journal	Telephone interview	Interview notes
Ian Mitchell	May 2006 July 2006 August 2006 3 meetings plus continuous email contact up to July 2007.	Robert Mitchell partnership, chair of SGT and Chair of the Bramley campaign	At the university of Birmingham, and on his farm	Interview notes / not recorded
Andrew Tinsley	May 2006	Horticultural development council	Telephone interview	Not recorded key details on the structure of industry and appropriate contacts
Des Mckeever	August 2006	Marketing agent for class two fruit	Hotel foyer	Interview with notes
Derek Whitnall SGT manager	July 2006	SGT	Head office	Interview notes
Robert Mitchell	July 2006	RMB	On Fruit Farm	Interview notes / not recorded
Andy Sandler	August 2006	Norman Collett	Head office	Interview notes / not recorded
Graham Jenner	November 2006	Bayer crop Science	Head office	Interview notes
James Simpson	November 2006	Adrian Scripts These are growers packhouse supplier to Tesco	Head office	Interview notes
John Morgan	August 2006	International produce	Wakefield	Interview notes

John Breach	August 2006	Chair of British independent fruit growers association	Telephone interview	Interview notes
Stuart Carter	August 2006	Interlink – buys sliced and processed apples from Fourayes	Warrington	Interview notes
Chris Browning	August 2006	Non-grower member of SGT - Cottage farms ltd (packhouse)	At the pack house	Interview notes
Rob Browning	August 2006	Member of SGT	Telephone interview	Interview notes
Richard Greenwood - Manager	September 2006	Hazel street ~Farm Horsmonden Tonbridge, TN1 8EF	At Hazel street farm	Interview notes

HOPs	October 2006	One of the two employment agencies for the sector	National fruit Show	Interview notes
Mike Jobbin 1st Interview	October 2006	Orchard World	Colchester	Interview notes
Mike Jobbin 2nd Interview	6th November 2006	Orchard World	Telephone interview	Interview notes – confirms certain details
Phil Acock	January 2007	Fourayes Slicer and dicer	At Factory	Interview notes
Martin De la Fuente		Tesco – Top fruit buyer	Tesco head office	Interview notes / not recorded
Steven Packer	January 2007	A and P hill This agent works closely with WWF and removes class 2 or not spec fruit	At head office	Interview notes
Huang fruits	January 2002	This took place in Shaanxi Provence In Xian at the Huang fruit packhouse and office	At head office	Written notes from interview- working with translator

Dairy Interviews

	Date of interview	Company	Location	Tape record number
Mansell Raymond 1st interview	22nd April 2008	Farmer and Farmer director for First Milk	Jordanston	Cassette tape interview
Mr Lewis	17th July	Cilau farm	Interview by phone	No recording
Richard Hollingsdale 1st Interview	**22nd July 2008**	Marketing Director First Milk	Welsh Show	1st interview
Interviews with the board of directors First Milk	22nd July 2008	Richard Davis – supplies Tom Cambell Robert Shearlaw – Deputy chair Alan Taylor	The Welsh show July 2008	Not able to take a recording, held within members tent
Richard Hollingsdale 2nd interview	23rd July	Ibid	Over the phone	DS400034
Nigel Evans	24th July 2008	Farmer	Nr Fishguard	DS400016 and V0r 04

Ian Jaimeson	25th July 2008	Hendre Eynon Farm supplies First Milk and part of grass Hooper group.	St David's.	Refused to be recorded
Thomas G				Ds400018 plus tape recordings
Eric Evans	29th July 2008	Conlwyn farm Llanchaer	Fishguard	Request that should not be recorded – interview notes
R Lewis	29th July 2008	Organic farmer Trefasser	Strumble head	DS400019
E Evans	31st July 2008	Farmer supplying Milk Link		Request refused
Matt Sheenan	12th august	Dairy Farmers of Britain	Head office	Ds400020
R J Morgan,	17th August	Cilwn Fach	Upper Scolton	Brief interview notes
W O Reed	17th August 2008	Farmers supplying Dairy Farmers of Britain	Upper Scolton , Spittal	DS400022
Alan Pritchard	18th August 2008	Panty Philip	Dwrbach	DS400023
Phil Leigh	19th August 2008 2010	Glanbia	Interview took place at Pembrokeshire show	Interview notes
Tom Davis	August 2008	Highmead dairy Lynbudder	Telephone interview	Interview notes
Farmer at Little Newcastle	August 2008	Farm little Newcastle	Little Newcastle on Farm	DS400029
Simon Davis	17th September	Organic farmer Brynhfydd, Penaear, Whitland –supplies Dairy farmers of Britain at the time.-	On farm	DS400031
Robert Somerfield	19/09/08	Farmer in Argyle	Telephone interview	Vor 7 and DS40024
Hywel James	18th September	Organic farmer who supplies Rachels through the cooperative Calon Wen	Plasybellan	V0rc009
David Fisher	25th September 2008	Farmer in Chorley First milk	David.fisher@btopen.com	Email and telephone DS400033

Graham James	13th October 2008	Bottling Plant, also works with ~Willie Pritchard to make diversified milk drinks etc.	Mark Hunter Ltd	DS400043
Sean Beer	October 2008	Academic – advise on feed and implications of feed in terms on yield and costs	Bournemouth University background agriculture	VO8
Cambell Appleton	October 2008	Saputo	Cambell.Appleton@ saputo.co.uk	Brief interview Longer interview was to follow but cancelled at last minute twice
Robert Gibby	October 2008	Bethseda	Dairy small scale	DS400030
Mr Ridge	September 2008	Farmer , director of Omsco	The Granary Behesesada	DS400027
Peter Gash	September 2008	Farmer near Whitland	Whitland	DS400028 V010 and v011
Ian Potter	August 2008	Runs an advisory website	Independent advisor	Brief interview at Pembrokeshire show
Mr Evans	15th October 2008	Little Hooks Dairies Ambleston	At the dairy	Ds400047
Gareth Rowlands	October 2008	Ex Director of Rachel dairies	Nr Aberystwyth	DS400045 and DS400046
Edward Perkins	August 2010	Independent advisor	The Pembrokeshire show	Interview notes
Ed Andrews	October 2010, and 2011	dairy farmer and produces ice cream		notes from interview

Pig interviews

	Date of interview	Company	Location	Form of recording and recording number
Chris Barlow 1st interview	26th August	Yorkshire Farmers Livestock marketing Ltd	Malton	Tape -cassette
Ian Paragreen	28th August	Scotlean	Telephone interview	Interview notes
Thompson Norton	10th August 2008	Farm producing pigs supplied to Beadle Price – independent marketing agent	Norton Sheffield	DS00013
Philip Hardy	7th August 2008	Marr grange farmer, wholesaler and retailer	Marr Grange farm	DS400004
Mr Perkins	9th August 2008	Small scale farmer – takes his pigs to Selby market	Hollin Hill Farm Worral	Refused to be recorded
Mr Parks	August 2008	Member of Scotlean	Farm near Rotherham	Refused to be interviewed
Angela Cliffe	August 2008	Bpex	North Derbyshire knowledge transfer group	Interview notes (short interview, plus email)
Chris Barlow 2nd interview	September	marketer for YFLM	Malton	DS40025
Ian Paragreen -	15th September	Scotlean	Woodhall service station	Interview notes
Tim Leigh	18th September	AQM	Short telephone interview	Interview notes
Mike Bell		Farmer member of YFLM	Phone call	DS40032 4
Don Sanderson	21st September 2008	Farmer / exdirector of YFLM	Phone call	DS400034 and DS400035
Phil Sanderson	30th September 2008	Farmer member of YFLM		DS400038
Simon Newby		Farmer member of YFLM		DS40039
Dan Day	20th October	Grampian foods	Short telephone interview	Interview note
Richard Longthorpe	11th November 2008	Farmer member of Thames Valley , also member of BPEX board, chair the Pig industry training strategy implementation group,	At his farm	DS40048
Chris Barlow 3rd	11/02/2009	discussion on the power dynamics in food	telephone interview	DS40052

interview				Makes point that farmers wouldn't want to invest in abattoir
Richard Smith interview 1	29th July 2009	Bedfordia supplies Meadow quality	Telephone interview	interview notes
Katherine Rhodes	31st July 2009	Farmer member of YFLM	Holme farm	DS40063
Richard Smith 2	4th August 2009	Bedfordia supplies Meadow quality	Nr Bedford	DS40064
Guy Kiddy	4th August 2009	Shuttleworth College / lecturer and farmer	Shuttleworth college	DS40064
Angela Cliffe	August 2008	Bpex	North Derbyshire knowledge transfer group	Interview notes (short interview, plus email)
John Walker	20th September 2010	David Burtin Farms	Sausages	DS40067
Peter Batty	23rd September 2010	Director of Yorkshire farmers previously a member of Scotlean	On Farm	DS40069
Mr Templeton	20/11/2009	Supplies Scotlean	Spittalmoor farm	DS40065

Appendix 3 Summary of qualitative data analysis methods

	Description	Strengths
Content analysis	Intense examination and classification of the text into an efficient number of categories that represent similar meanings Content can be analysed in terms of the descriptive and its meaning	Allows for use of predetermined themes and offers a basis for a preliminary analysis of themes derived from theoretical framework but is also flexible in that it allows for emergent themes
Conversation analysis	Based on ethnomethodology, it looks at language as a means of understanding how people make sense of their world	Valuable in social constructivists' work on society and understanding how context influences participants' production of social reality
Comparative analysis	This is a technique used to make causal inferences on the basis of a small number of cases. It is based on the intensive analysis of a few cases, which allows for the researcher to look for rival explanations.	An effective method for Theory development
Narrative analysis	Focuses upon the narrative as a unit of analysis	Allows for the re-formulation of people in different context
Discourse analysis	Method of analysing naturally occurring speech, it looks at words, sentences, linguistic features and focuses upon the way language is used and where and when it is used	It is valuable in the examination of talk as indicators of social practice and gives answers to social questions and how people relate to their social environment
Thematic analysis	Thematic analysis is a method for identifying, analysing, and reporting patterns (themes) within Data, and indeed has been known to refer to content analysis and discourse analysis. Its distinguishing feature is that it allows the themes to emerge from the data	It allows works in conditions where there is an assumption of an intransitive or subjective truth
Grounded theory	It starts with an examination of a single case study and develops a theoretical understanding of that data. The theoretical construct is then used to examine another case study and if there is a fit with the statement then another case is selected and so on. Where there is no fit there is an adjustment to the statement.	To gain an understanding of the abstract categories grounded in the data and is designed to come to a generalisation of a population

Appendix 4 Comparative analysis of the three case studies

		SGT		First Milk /Milk Marque/MMB		YFLM	
		Pre-retail consolidation	**Post retail consolidation**	**Pre-retail consolidation**	**Post retail consolidation**	**Pre-retail consolidation**	**Post retail consolidation**
Emerson framework Increase in prices and margins	**+ scarcity**	**Yes**	**No**	**Yes**	**No**	**Yes**	**Yes**
	+ motivational interest	**No**	**No**	**No**	**No**	**No**	**No**
Other factors affecting leverage	**Pressure on prices by category leaders**	**No**	**Yes**	**No**	**Yes**	**No**	**Yes**
	Proactive Action of competitors	**No**	**Yes**	**Yes –(after est. Milk Marque)**	**Yes**	**Yes**	**Yes**
	Consolidation of customer base	**No**	**Yes**	**Yes**	**Yes**	**No**	**Yes**
	High asset specific investment (coop)	**No**	**Yes**	**Yes**	**Yes**	**No**	**Yes**
	UK competition policy	**No**	**No**	**No until Milk Marque**	**Yes**	**No**	**No**
	Small Size relative to buyers	**No**	**Yes**	**No**	**No (complexity)**	**No**	**Yes**
	High risk of moral hazard – product perishability	**Yes**	**No**	**Yes**	**Yes**	**Yes**	**Yes**
Olson, Longevity/ cohesion	**Monitoring . lobbying ; negotiation , search and control costs Inc agency**	**N/a**	**No**	**No**	**Yes**	**No**	**No**
	Shirking costs/ sanction costs	**N/A**	**No**	**Yes**	**Yes**	**No**	**No**

Appendix 5 – Endnotes to case studies: some of the key sources of data

Section A5.1 Endnotes for Topfruit

[xlvi] Interviews

1. Chair of cooperative
2. Manager of cooperative
3. Hayward D. J. and Le Heron (2002) Horticultural reform in the European Union and New Zealand: further development towards a global fresh fruit and vegetable complex, Australian Geographer, Vol. 33, no. 1 pp. 9-27.

Supporting evidence

1. Ellis P.G. (1968?) Marketing boards and the fruit import trade of the United Kingdom, Wye College, nr Ashford, UK

[xlvii] Figures derived from

1. Orchard Surveys and MAFF publications on the horticultural sector from the period Basic Horticultural statistics. MAFF data from the period
2. Interview with James Crowden, Feb 2006
3. Interview with Liz Copas, Feb 2006
4. Interview with Phil Hillman, Feb 2006

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1. Interview with manager of SGT, additional information sought from the Financial Services Agency, and provided on company accounts that can in effect only trace financial records back to the 1980s.
1. Information appears to be consistent with Rayner A. J. and Ennew, C. (1987) Agricultural cooperation in the UK, Agricultural administration and extension vol. 27, and no.2 pp. 93-108.
2.

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3. Starkey, M. W. and Carberry-Long M. J. (1995) The renewed case for cooperating in marketing British apples, British Food Journal, vol.97, no. 4, pp. 3-8.
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1. Basic Horticultural statistics
2. National food survey statistics
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4. Bowbrick, P. (1976) Market Margins investigations and price control of fruit and vegetables, Irish Journal of Agricultural Economics and Rural Sociology, vol. 6 pp. 9-20.
5. Raynor, A.J. and Ennew, C.T. (1987) Agricultural cooperation in the UK: A historical review, Agricultural Administration, and Extension, vol.27 pp. 93-108.

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1. Hinton, W.L (1972) Economic policy for British horticulture and the common market, Acta Horticulturae 40, third symposium on horticultural economics.
2. Rayner A. J. and Ennew, C. (1987) Agricultural cooperation in the UK, Agricultural Administration and Extension, vol. 27, no. 2 pp. 93-108.
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4. Kirk, J.H. (1968) The structure of agricultural marketing, in UK, European Journal of Marketing, vol. 2 no. 1 pp. 24-36.

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1. Interview with Adrian Barlow
2. Interview with East Malling research centre
3. Jackson, J.E. (1989) Worldwide development of high density planting in research and practice, Acta Horticulturae, Orchard and planning systems
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1. Interviews with Adrian Barlow and East Malling research centre

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2. Raynor, A.J. and Ennew, C.T. (1987) Agricultural cooperation in the UK: A historical review, Agricultural administration, and extension, vol.27 pp. 93-108.

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1. Data drawn from MAFF and DEFRA
    - Orchard Survey data 1979-1994.
    - Agricultural horticultural census, 1979-1994.

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1. Data drawn from MAFF and DEFRA
    - Agricultural and Horticultural Census 1979-1994
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[lxxvi] Interview

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2. Corroboratory evidence in emails
3. Orchard World manager
4. Marketeer Chingfords

[lxxvii] Interview

5. Grower and chair of SGTI, marketeer and manager of SGT, Packhouse manager and account manager top fruit.
6. Corroboratory evidence in emails
7. Orchard World manager
8. Marketeer Chingfords

[lxxviii]

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    c. Farm business surveys

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[lxxxiv] Interviews

1. Chair, manager and growers from SGT.

[lxxxv] Interviews

1. Pack house managers, SGT and other growers, managers from SGT and competitors

lxxxvi

Interviews

1. Pack house managers, SGT and other growers, independent marketeers

lxxxvii

1. Unpublished materials and interviews supplied by Chair and growers.

lxxxviii Interviews with

1. Chair of SGT, Growers and packhouse manager

lxxxix

1. Chair of SGT. growers and sector specialist

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1. Chair of SGT. Growers , industry specialists and managers of suppliers into retail sector

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[cxxx]

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Interview

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cxxxix

Interview

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Interview- Member and procurement manager, Dairy Farmers of Britain

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Small scale farmers – members of First Milk

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2. Agritrade (2009) Pig abattoirs restructure as herd numbers fall, www.agritradenews.co.uk

cxlv

1. Anon (2007) Danes take a slice of the UK Pig market, 10/2/2007, Farmers Weekly ww.fwi.co.uk/articles/2007/10/02/107194/Danes
2. Tulip company reports between 2004 – 2011
3. Vion company reports over the same period
1. Corroboratory evidence on decline in numbers of abattoirs, Palmer, C. W. 2008 The future for abattoirs, note by Agricultural and Horticultural Development Board meat services, ADHB consulting, April 2008 *www.food.gov.uk/multimedia/pdfs/board/fsa080504a2.pdf*

cxlvi

1. there is a requirement under UK policy that all abattoirs should have a registered vet attached
2. Interviews Marketeer YFLM and procurer for key customers
3. Additional resources included EC (2004) case no comp/m.3461 Danish Crown and Flagship foods, regulation EC no 139/2000 merger policy, Article 6/b date 17/06/2004.

cxlvii

1. This figure is based on a calculation based on data extracted from a range of sources including BPEX, DEFRA. The figure could be inflated, current share of market by Waitrose of all groceries is around 4.5%, up from 4.3% on the previous year. (Walker I. 2012)Walker I (2012) Asda, Waitrose Market shares rise, Tesco falls, Dow Jones Newswires; 44-20-7842-9296; ian.walker@dowjones.com

2. Corroboratory evidence in Saunders A. (2009) Meeting the retailers' expectations, presentation on-line presentation.

cxlviii

1. Brief interview with procurer – Vion, who indicated that these represent a minute proportion of the pigs they produce. This information stems from a discussion with two Vion members attending
2. EFFP (2009) Improving the competiveness of the UK pig meat industry, September 2009.

cxlix

1. Cranswick plc. report 2010, http://www.cranswick.plc.uk/downloads/Cranswick_R_A_2010.pdf
2. Anon, (2012) Cranswick Restructure at Preston Site, Published 1st June 2012 http://www.meatinfo.co.uk/news/fullstory.php/aid/14092/Cranswick_restructure_at_Preston_site.html
3. http://www.morrisons.co.uk/corporate/Media-centre/Corporate-news/Morrisons-acquires-meat-processing-facility1/
4. Annual report 2008-2009 Morrisons, http://www.morrisons.co.uk/Documents/Morrisons_Report-0809.pdf

cl

1. Interviews former director YFLM, member of rival cooperative, member of BPEX board and chair of the Pig Industry Training Strategy Implementation Group.

cli Attempts to explore the situation with both Danish Crown and Vion met with an evasive response.

clii

1. Interviews former director YFLM, member of rival cooperative, member of BPEX board, chair of the Pig Industry Training Strategy Implementation Group, former employees of Cranswick and marketeer YFLM

cliii Interviews with Marketeer YFLM- additional information based on interviews with former employees of Cranswick

cliv

1. Interviews, Marketeer YFLM, Director Scotlean, independent farmers and farmer directors YFLM

clv

This is derived from

1. comparisons of data on prices from a data base supplied by Chris Barlow at YFLM,
2. Bpex data and
3. data generated from interviews from members of YFLM,

clvi

1. Marketeers YFLM

clvii

1. Interviews - Members and Farmer directors

clviii Interviews: Members of YFLM , members of other cooperatives and independent farmers

clix

ETTP (2009) Improving the competitiveness of the UK pig meat industry EFFP, September 2009.

clx

1. High production costs and margins of pig fattening farms, 2008 report, Brussels 20th Feb 2009.
2. Fowler T.(2007) 2006 –pig cost of production in selected countries , BPEX Milton Keynes.

clxi

4. DEFRA (2009)Agriculture in the UK, 2009, DEFRA, HMSO, London.
5. DEFRA (2007) Agriculture in the UK, 2007 DEFRA, HMSO, London.
6. DEFRA (2006) Agriculture in the UK, 2006 DEFRA, HMSO, London.

[clxii] Interviews with Pig farmers across the sector members, non members and independents.

[clxiii] Competition commission report of 2006. *www.competition-commission.org.uk/rep_pub/.../085c03.pdf*

[clxiv]

1. Tulip, Vion, Cranswick company reports 2008- 2010
2. Bowman, A. Froud, J. Johal, S. Law, J. Leaver, A. and Williams, K. (2012) Bringing home the bacon, CRESC Public interest report, June 2012.

[clxv]

1. Marketeers YFLM

[clxv] UK: Vion plans more UK job cuts **By:** just-food.com | 24 February 2010 htttp://www.just-food.com/news/vion-plans-more-uk-job-cuts_id109962.aspx ACESSED 14TH Feb 2011.

2. Anon, (2009) Tulip cuts its headcount by up to 375, 17th Jan 2009 , The grocer http://www.thegrocer.co.uk/fmcg/tulip-cuts-its-headcount-by-up-to-375/196740.article accessed , 2oth Jan 2011.

[clxvi]

Interviews with marketeers, members and directors of YFLM

[clxvii]

1. Interview with procurement manager Grampian food
2. Bpex labelling report, (2006) ***bpex****.org.uk/articles/dod****own****load.asp?a...****bpex****.org*
3. *Bpex labelling report up dated , (2009)* ***bpex****.org.uk/articles/dod****own****load.asp?a...****bpex****.org...*
4. *Bedington, E. (2010) Pork report maintaining momentum, Meat info 23rd July 2010*

[clxviii]

1. Interview with procurement manager Grampian food
2. Bpex labelling report (2006) – revisit
3. (something going wrong here)

[clxix]

1. Interviews with Marketeers, Members and members of other cooperatives

[clxx]

1. Interviews with Marketeers and member involved in production of sausages YFLM

[clxxi]

1. Interviews with members and director of YFLM

[clxxii]

1. Interview with marketeers, members and director of YFLM

[clxxiii]

1. Interviews with Organic pig producer – member of other cooperatives, non-members Marketeer and Managing director, and members

[clxxiv]

2. Interviews with members

[clxxv] Interview with Marketeer

[clxxvi] ibid

a. Corroborated by interviews with members and former member/directors and non-members

[clxxvii] This appears to be a sensitive issue – a brief conversation with a Vion procurement manager – elicited the point that at 100,000 kills per week there were more than sufficient volumes of UK pigs, despite only a 46% self-sufficiency level (his figures) The figures are substantiated by BPEX figures

[clxxviii] ibid

b. Corroborated by interviews with members and former member/directors and non-members